

**GT<sup>3</sup> 3230**

32000 bu/hr

**AKRON**



REVIEW: 2014/001

# **USER'S MANUAL**

OPERATION, MAINTENANCE AND SPARE PARTS



# **GTX 3230**

## ***GRAIN BAGGER***

### **User's Manual**

Operation, Maintenance  
and Spare Parts

**Code: 130047**

**Edition: April 2014**

**Review: 2014/001**

Due to the continuing improvements in the design and manufacture of **AKRON®** products, **MICRÓN FRESAR S.R.L.** reserves the right to modify components and/or specifications without prior notice.





## 1. INTRODUCTION

This user's manual describes the functions and components of the **AKRON®** model **GTX 3230** grain bagger. The machine's operation and maintenance instructions are detailed here, as well as the necessary safety recommendations. The information provided in this manual is fundamental for the efficient and safe operation of the machine. This documentation is included in order to guarantee its optimal operation. This is why this manual should be available at all times either together with the machine or at least within the operators' and supervisors' reach.

### 1-a. The Purpose of the Machine

The **AKRON® GTX 3230** grain bagger is a state-of-the-art machine for storing grain in plastic grain bags according to cutting-edge trends in this type of operations. This design enables the machine to be completely dismantled in order to minimize its volume for transport between countries.

The machine's simple design concept reduces its maintenance requirements to a minimum and guarantees its optimum operation under a variety of conditions. However, it must be noted that this grain bagger has been designed exclusively for routine farm duties and that the guarantee will be valid only as long as the machine is used respecting the operation procedures described in the present manual.

For operating this machine and for any maintenance tasks or repairs, the instructions given in the present manual and in any other documentation supplied by the manufacturer must be followed. Special attention must be paid to safety precautions and recommendations, as well as all the pertinent local Occupational Health & Safety laws in force.

Any arbitrary modification carried out on the machine or its components will release the manufacturer from any responsibility arising from damage or injury that may occur as a result of such modification.



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### 3. SAFETY

Even though the machine's operation is simple and safe, it is essential that all grain baggers operators and supervisors read this user's manual and have an in-depth knowledge of its contents. In this way, situations of danger will be avoided for the operator, third parties and any goods in the surrounding area.

There must be a written record of when the operators are trained in every detail of the machine's operation.

#### 3-a. Attitude Toward Safety

Just as with the operation of any other machine, what is most important for preventing accidents of any kind is the positive attitude of operators and supervisors toward safety. As well as observing the manufacturer's recommendations, the habit must be developed of foreseeing and analyzing every possible contingency that could arise during the operation of the machine. Even though it is impossible to foresee all possible situations, this habit helps to prevent the large majority of hazardous situations.

#### 3-b. "ATTENTION" Symbol and Signal Words



Throughout the present manual, the "Attention" symbol is used to indicate risk situations for the operator, the machine, other equipment or other people.

This symbol will appear together with certain signal words depending on the relative seriousness of each risk situation.



**DANGER:** This identifies an imminent hazardous situation whose consequences may cause death or serious injuries if not avoided.







**WARNING:** This identifies a potential hazardous situation whose consequences may cause death or slight to moderate injuries if not avoided.



**IMPORTANT:** This describes a particular situation where the machine could be damaged or its normal operation could be affected.

#### 3-c. Personal Protective Equipment

Micrón Fresar S.R.L. recommends the use of the following Personal Protective Equipment in order to avoid any possible injury:

Situation	Personal Protective Equipment			
				
Tractor Driver	✓	✓		
Operator	✓	✓	✓	✓

#### 3-d. Safety Warnings

On different parts of the machine and on its accessories you will find decals with accident prevention symbols which must be considered as part and extension of the instructions detailed in this manual. Special care must be taken to ensure these decals are present and legible during the entire working life of the machine.








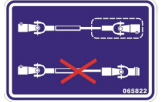





If for any reason any of these gets lost or becomes illegible through wear, it is important to replace it immediately, indicating its corresponding code. To ask for a replacement decal, please contact either the manufacturer using the information given in 4-b "Contact information", or your local Technical Representative.

#### 3-e. Risk Analysis

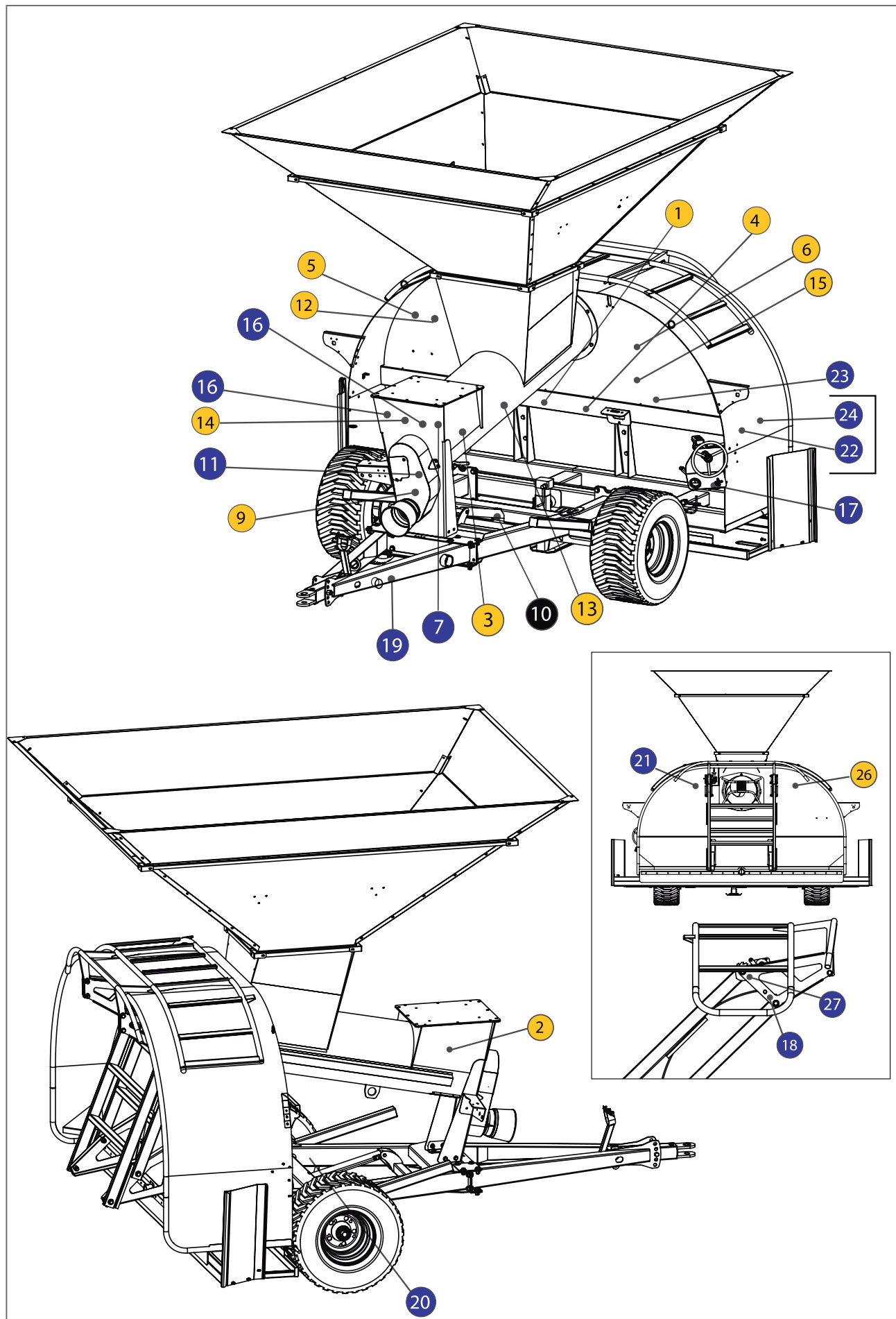
The risk situations that typically arise during the operation of this machine are detailed below. Recommendations are made that are of vital importance for the safety of the machine operators, of other workers nearby, and the machine itself.

The pictograms used are taken from IRAM standard 8075 "Tractors, agricultural and forestry and green space maintenance machinery - Safety signs and hazard pictograms - General principles and features". For more details, their location on the machine is shown in the following picture.

## DECALS

#	IMAGE	CODE	NAME	QTY
1		114138	<p><u>Risk situations:</u></p> <ul style="list-style-type: none"> <li>• During machine transport</li> </ul> <p><u>Particular recommendations:</u></p> <ul style="list-style-type: none"> <li>• When transporting the bagging machine, stay below its speed limit for safety reasons.</li> </ul>	1
2		114200	<p><u>Risk situations:</u></p> <ul style="list-style-type: none"> <li>• During machine transport</li> <li>• During bagging operation</li> </ul> <p><u>Particular recommendations:</u></p> <ul style="list-style-type: none"> <li>• Never stand or travel on the machine's structure.</li> </ul>	1
3		114181	<p><u>Risk situations:</u></p> <ul style="list-style-type: none"> <li>• During bagging operation</li> </ul> <p><u>Particular recommendations:</u></p> <ul style="list-style-type: none"> <li>• Keep a safe distance from the machine.</li> </ul>	1
4		016135	<p><u>Risk situations:</u></p> <ul style="list-style-type: none"> <li>• When operating the machine</li> </ul> <p><u>Particular recommendations:</u></p> <ul style="list-style-type: none"> <li>• Observe the warnings indicated in the pictogram in order to avoid accidents</li> </ul>	1
5		114112	<p><u>Risk situations:</u></p> <ul style="list-style-type: none"> <li>• When operating the machine or performing maintenance tasks</li> </ul> <p><u>Particular recommendations:</u></p> <ul style="list-style-type: none"> <li>• Carefully read the operator's manual so as to become acquainted with its features and operation.</li> </ul>	1
6		114122	<p><u>Risk situations:</u></p> <ul style="list-style-type: none"> <li>• During grain bag preparation</li> <li>• When performing maintenance tasks</li> </ul> <p><u>Particular recommendations:</u></p> <ul style="list-style-type: none"> <li>• Stop the motor and remove the key before performing setup or maintenance tasks.</li> </ul>	1
7		114150	Safety decals	1
8		065822	Cardan coupling position	1
9		114152	<p><u>Risk situations:</u></p> <ul style="list-style-type: none"> <li>• During bagging operation</li> </ul> <p><u>Particular recommendations:</u></p> <ul style="list-style-type: none"> <li>• Do not open or take away the safety protections while the motor is running.</li> </ul>	1
10		114290	Identification plate	1
11		114128	Maximum 540 RPM	1
12		114187	<p><u>Risk situations:</u></p> <ul style="list-style-type: none"> <li>• While uncoupling the machine from the tractor, the towbar lifts abruptly.</li> </ul> <p><u>Particular recommendations:</u></p> <ul style="list-style-type: none"> <li>• Observe the pictogram's indications by installing the support leg before uncoupling the machine.</li> </ul>	1
13		114162	<p><u>Risk situations:</u></p> <ul style="list-style-type: none"> <li>• During bagging operation</li> </ul> <p><u>Particular recommendations:</u></p> <ul style="list-style-type: none"> <li>• Do not stand within reach of the auger or introduce your hand while the motor is running.</li> </ul>	1

#	IMAGE	CODE	NAME	QTY
14		114132	<p><u>Risk situations:</u></p> <ul style="list-style-type: none"> <li>• During machine positioning</li> <li>• During bagging operation</li> </ul> <p><u>Particular recommendations:</u></p> <ul style="list-style-type: none"> <li>• Never use the driveshaft without its protector.</li> <li>• Never cross over the driveshaft while it is coupled.</li> <li>• Use, maintain or repair the coupling according to the manual's indications.</li> </ul>	1
15		126750	<p><u>Risk situations:</u></p> <ul style="list-style-type: none"> <li>• When parking the machine on a slope</li> </ul> <p><u>Particular recommendations:</u></p> <ul style="list-style-type: none"> <li>• Apply the brake to prevent the machine from moving.</li> </ul>	1
16		114158	Maintenance	1
17		180109	Hydraulic Brakes	1
18		126226	Cradle latch	1
19		026315	Support leg	1
20		182120	Lifting jack	2
21		026227	Patent pending	1
22		026220	Left crank	1
23		026221	Right crank	1
24		025118	Hydraulic Pump	1
25		126223	Brake adjustment	1
26		126224	Risk of injury or accident.	1
27		126225	Cable clamp	1
28		128000	Important	1





## 4. RECEIVING THE MACHINE

The **AKRON® GTX 3230** grain bagger is delivered almost ready for operation. Only a number of checks about issues related to transport must be made upon receiving the machine:

- 1) If the machine is delivered on a truck or similar vehicle, check that all the slings and elements used to fix the machine to the transport are removed.
- 2) Check that the tire pressure is at the values recommended in section 7 "Maintenance".
- 3) Check that all the main machine components are present and in good condition. The spare parts list included at the end of this manual makes a good checklist.
- 4) All the safety guards and protections should be present and in good condition (e.g., the transmission cover on the tractor side, the driveshaft cover, etc.).

### 4-a. Identification of your Grain Bagger

When ordering replacement parts or requesting technical assistance or information, always provide the following details for product identification purposes:

- Model
- Mass (kg)
- Serial #

This information is engraved on the identification plate located on the wheel chassis.

Please fill in your machine's data here for your records:

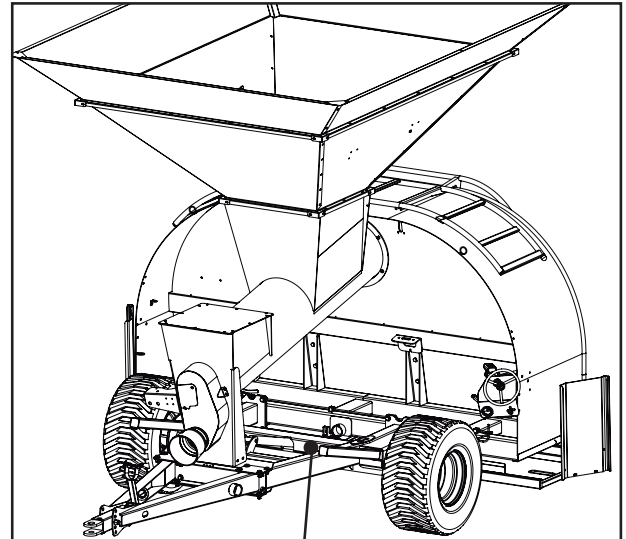


Figure 4.1  
Identification plate  
location.



Please fill in your machine's data here for your records:

MODEL:

MASS (KG):

SERIAL #:

**NOTE:** The data, specifications and illustrations in this manual are based on the information available at the time it was written.

Due to the continuing improvements in the design and manufacture of **AKRON®** products, **MICRÓN FRESAR S.R.L.** reserves the right to modify components and/or specifications without prior notice.

Figures are only for illustration purposes, no measures should be taken on the drawings.

#### 4-b. Contact Information

Should you need any further explanation regarding the contents of this manual, please contact us:

##### **Micrón Fresar S.R.L.**

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X2400EFN - San Francisco (Córdoba)

ARGENTINA

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E-mail: export@akron.com.ar

www.akron.com.ar

#### 4-c. General Comments on Grain Storage in Grain Bags

The storage of dry grain in grain bags is a common practice among farmers, who see it as a flexible and economical system for keeping their grains, eliminating significant product commercialization costs associated with third party storage.

However, the effectiveness of this storage system largely depends not only on monitoring the condition of the grain inside the grain bag but also on the procedure used when bagging the product. This is why this manual includes various guidelines for working based on experience gathered from many farmers. Safety precautions are also included, based on analyses carried out according to current safety laws for agricultural machinery of this type.

It is most important then to respect both the order and the details of all the operations explained, since the success of the bagging operation in itself depends on this, as well as the maintenance of adequate safety conditions for the operators and all the equipment associated with the bagging operation.

It is the responsibility of the user to study this operations and maintenance manual, paying special attention to all the warnings included in each section and to the contents of section 3 "Safety".

#### 4-d. Operation Principles

The dry grain to be bagged, which is usually provided by a self-unloading grain cart, enters the grain bagger via its upper hopper; and an

auger conveys it to the inside of the grain bag. The auger is driven by the PTO of a towing tractor which moves forward coupled to the bagging machine.

The grain exerts pressure on an inclined plane located inside the bagging machine, and the resulting force moves the machine and the tractor coupled to it. The operating speed, closely linked with the resulting tension in the grain bag material, is adjusted by means of a braking system built in to the bagging machine which exempts the tractor from towing or braking.

The following chart shows the main functions of the machine and the components used to perform each of them.

Function	Related component or system
<i>Grain intake</i>	<i>Receiving hopper</i>
<i>Internal grain movement</i>	<i>Auger driven by tractor PTO</i>
<i>Movement of the bagging machine + tractor together</i>	<i>Automatic movement resulting from grain pressure on the machine's inclined plane.</i>
<i>Movement speed adjustment</i>	<i>Built-in braking system</i>

## 5. PREPARATION AND SETUP

### 5-a. Recommendations to Ease Subsequent Extraction

The **AKRON®** model **EXG 300** grain bag unloaders **AKRON®** are ideal complements to the **AKRON®** model **GTX 3230** grain bagger, and they require certain conditions in the situation and preparation of the grain bags.

If the initial tie on the grain bag is made using nailed boards or a plastic seal, less cereal will remain after extraction to be removed manually compared with using a rope tie (see paragraph 6-f “Closing the grain bag”).

Figure 1 shows that, if a grain bag is laid parallel to a wire fence, a minimum of 4- meter space must be kept between them, taking into account that the extractor loads a vehicle moving on its right-hand side from the point of view of the tractor driver.

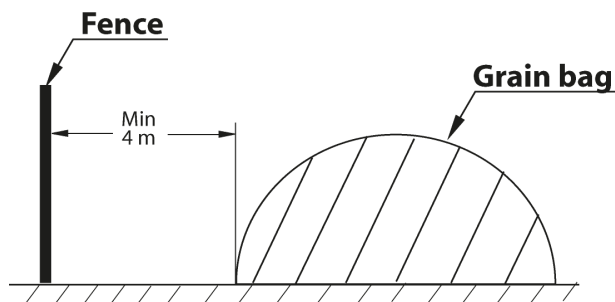


Figure 1- Minimum space between a grain bag and a wire fence

If grain bags have to be laid parallel to each other as shown in Figure 2, at least 1 (one) meter (3.25') should be left between them in order to work without difficulties during extraction. In any case, as indicated before, the most important precaution is to anticipate that the first grain bag can be easily accessed from the side on which the grain receiving vehicle must move.

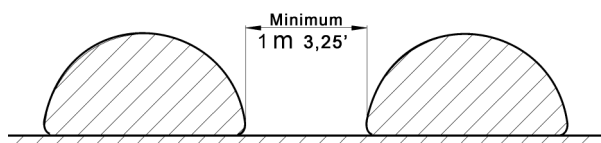


Figure 2 - Space between grain bags

### 5-b. Prior Checks in the Field

The soil must be firm, completely clean and free from remains of seeds, loose earth, weeds, etc., since otherwise the machine's braking conditions could be affected or the grain bag integrity could be at risk. This would logically have a negative effect on the correct conditions for the product's conservation. In the table shown on next page, some precautions are detailed regarding soil condition and its influence on bagging quality.

Preliminary ground preparation and cleaning are extremely important, since they involve little time and low cost but guarantee the integrity of the grain bag and thus greater reliability of the storage system.

### 5-c. Prior Checks on the Machine

It is essential for the machine to be in good state of maintenance as per the recommendations given in section 7 “Maintenance”. Nevertheless, the following are some simple checks that should be made prior to starting each grain bag.

- Tire pressure is a very important parameter, since it determines the performance of the machine, which works with permanent braking. The pressure should be between 2.4 and 2.7 bar (36 a 40 lb/pulg<sup>2</sup>) for adequate operation.
- It is fundamental to visually check that all accessories, locks, means of fixing, etc. are in place and there are no loose, damaged or lost parts. In any of these cases, the necessary adjustments or corrections should be made before operating the machine.
- All protections and safety covers should be checked to be in their place and free from any signs of wear that could hinder their functioning.
- It is advisable to clean all the machine surfaces as thoroughly as possible to make the work safer, since dirty surfaces become more slippery.

Precautions regarding ground conditions	Importance and related risks
<i>The selected place should be away from trees and forest walls.</i>	<i>It is a good measure to reduce the risk of accidental breakage.</i>
<i>The ground must be free of weeds, stubble, etc.</i>	<i>Imperfections on the ground could damage the bottom part of the grain bag during bagging, which would make it more prone to attacks from rodents.</i>
<i>There should be no loose soil, leftover grain, etc.</i>	<i>The braking capacity of the machine's wheels would be affected and the grain bag would therefore be filled at a tension lower than adequate.</i>
<i>There must be no steep level differences (holes).</i>	<i>If a wheel falls into a hole, the tray could touch the ground, pressing the grain bag against the silo tunnel with the risk of tearing the silo bag.</i>
<i>The ground must be transversally level.</i>	<i>If the machine tilts to one side while operating, grain would accumulate on one side of the grain bag and dangerous tensions would arise on the other side.</i>
<i>The ground must be longitudinally level (in the bagging direction).</i>	<i>The grain bag will "copy" any ground irregularity or imperfection, which can give rise to air spaces that may locally affect product conservation conditions.</i>
<i>On sloping ground, the operating direction must be against the slope.</i>	<i>Bagging must be carried out uphill for the grain bag to be filled in a more controlled and even way.</i>

#### 5-d. Grain bagger Parking

The machine, while not operating (unhooked from the tractor), is designed to remain stable on firm ground with a minimum slope of 8.5°. In order for the machine to remain in a stable position, before uncoupling it from the tractor, it will be necessary to install the support leg as shown in figure 3.

After following this procedure, apply the hydraulic brake.



Figure 3 – Support leg location



**WARNING:** When parking pointing down a slope or against it, the brake must always be applied (50 to 80 kg/cm<sup>2</sup>), or otherwise the machine will move.

#### a- Against the slope (Figure 4):

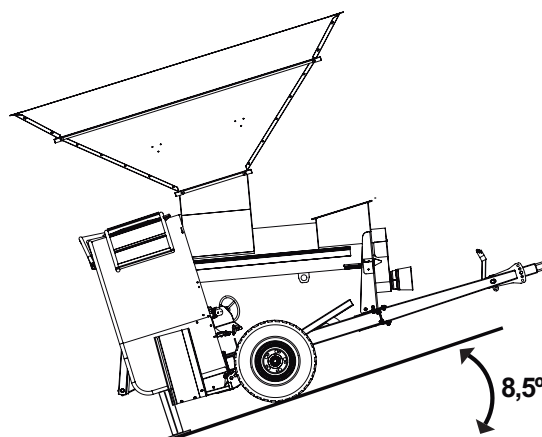


Figure 4 – Bagging machine parked against a slope

#### b- Pointing down a slope (Figure 5):

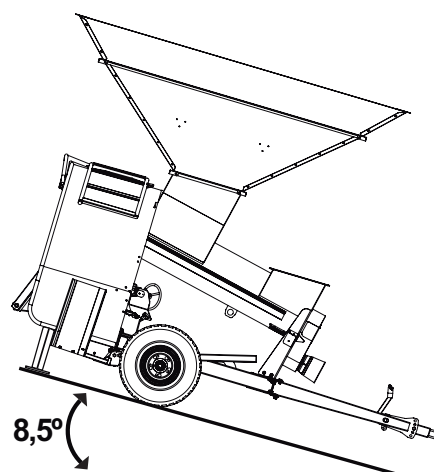


Figure 5 - Bagging machine parked pointing down a slope

### 5-e. Machine Positioning

The machine must be coupled to the driving tractor by the towbar, as shown in Figure 6. For safety reasons, the PTO should be connected only after the grain bag has been mounted on the machine.

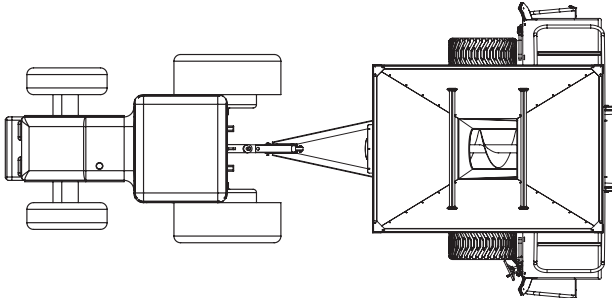


Figure 6 - Bagging machine coupled to the tractor

For mounting the grain bag, the machine must be coupled to the tractor, and the tractor's hand brake should be applied. The machine's brakes should also be applied. The handle operating the hydraulic brake pump can be seen in Figure 7. The pressure applied to the brakes' hydraulic system must be approximately 90 bar.

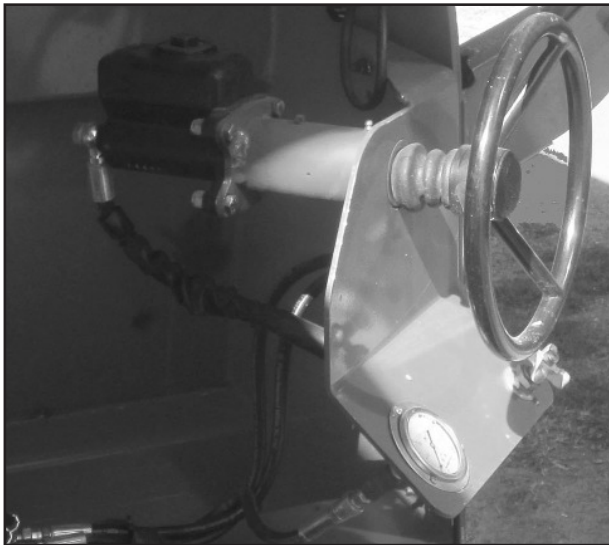


Figure 7 - Hydraulic brake system

### 5-f Adjusting the brake system.

Follow next steps to properly adjust brake pressure

#### PROCEDURE

- 1) Open the safety valve
- 2) Turn the wheel clockwise until desire pressu-

re is reached. Adjust pressure by turning the wheel clockwise or counter clockwise as necessary.

Close the safety valve once the bags manufacturer stretch recommendation is obtained.

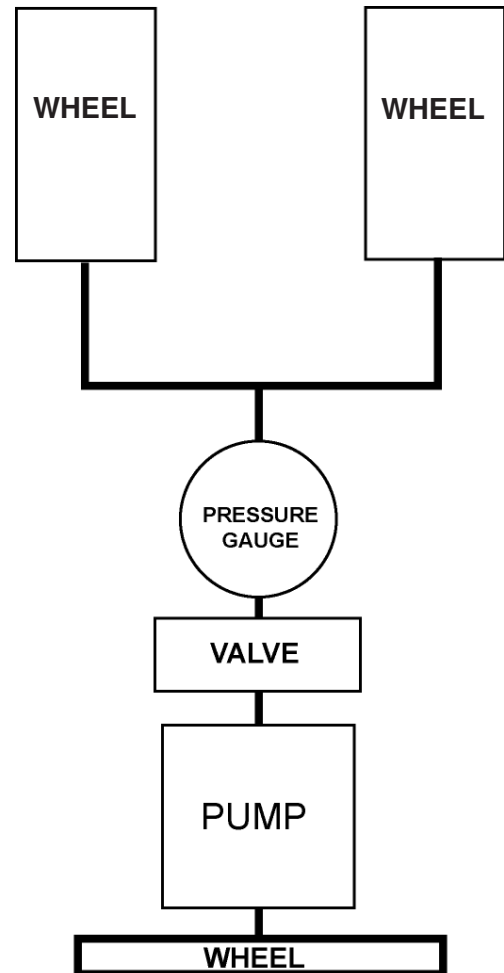


Figure 8 - Functions of the kit valves

### 5-g. Grain bag Preparation and Mounting

The following are basic instructions for grain bag preparation, but it is essential to observe the particular recommendations of the grain bag manufacturer, since different or additional precautions may be required.

The grain bag must be carefully removed from its package and unfolded on the area where the bagging will be started, which should be clean and level as explained in paragraph 5-b "Prior Checks in the Field".

Then the grain bag can be mounted on the cradle as explained below.





**WARNING:** When the tray is released and lowered, care should be taken not to trap the operator's feet.

1) Connect the hydraulic hoses to lower the hydraulic tray into its working position. The hydraulic tray accepts two possible configurations: Extended cylinder: it allows the user to put the bag in position for working. Retracted cylinder: working and transport position.



Figure 9 – Extended tray

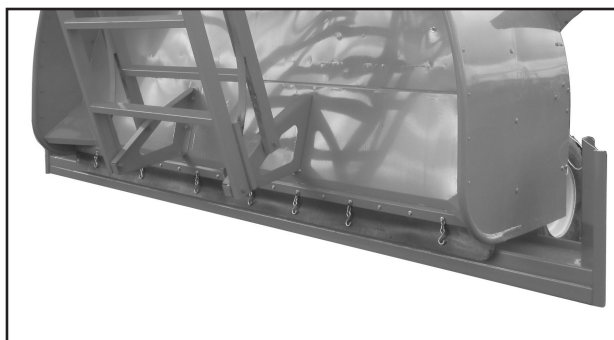


Figure 10 – Retracted tray

2) Remove the latch shown in figure 11 Then, activate the electrical winch to lower the cradle until reaching such a height to comfortably place the grain bag on the lift (70 cm aprox).

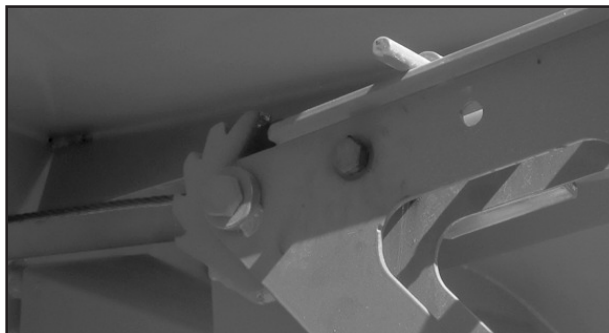
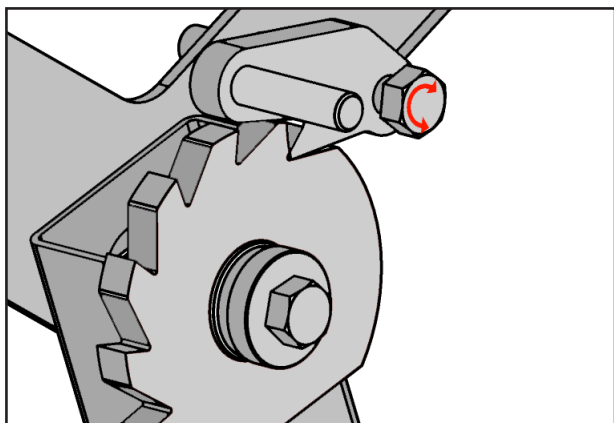


Figure 11 – Cradle fastened by locking lever.



**ATTENTION:** Never stay on the cradle trajectory while being lifted or lowered. Failure to follow this instruction can cause serious injuries to operator.

3) Use the bag manufacturer middle-of-the-bag mark to center the bag with the cradle. The stretch marks stamped on the bag should always be as shown in fig 13 (15 cm/ 6 inches from the end of the cradle).



Figure 12 – Cradle down in horizontal position



Figure 13- Positioning of the grain bag on the cradle

4) Activate the winch to lift the grain bag. Once the bag is in contact with the machine tunnel, an operator is required to put it into the tray and slide it into the machine sides (figure 14). At the same time the grain bag embraces the tunnel, its bottom part should be supported by the tray. Make sure the grain bag reaches the bottom of the tunnel and all the folds are duly contained in the tray.



Figure 14 Cradle in its highest position.

5) Once the grain bag has been lifted onto the bagger tunnel, follow the instructions below:

Lift the rubber flap, as shown in figure 15.

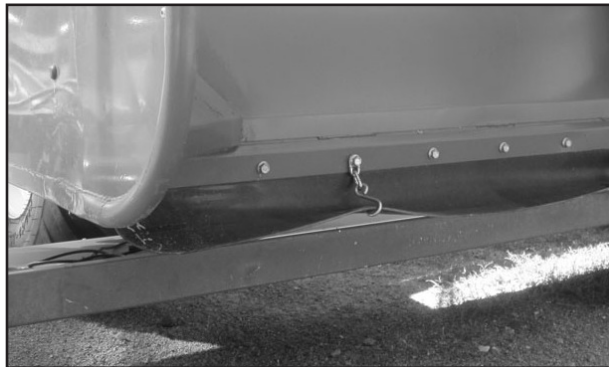


Figure 15 Rubber flap

Raise the tray until reaching half of its way.

Pull the bag from the folds until necessary (6 folds from the tunnel bottom).



Figure 16 Hydraulic tray

Put one of the braided elastic ropes through the hole in the tray from top to bottom and tie it to the link in its bottom part.



Figure 17 Elastic rope hole

1) Put the rope over the bag across the tunnel and repeat the previous step.

2) Raise the tray into its operating position.

3) Take one of the fixed ropes and follow the instructions below:

- Tie one of its ends to one of the rings in the tunnel front.

- Tie it to the elastic rope.

Then, take it back towards the ring, and tie it to the ring making sure the fixed rope is tightened enough.

-Repeat these steps with the three remaining fixed ropes as shown in figure 18.

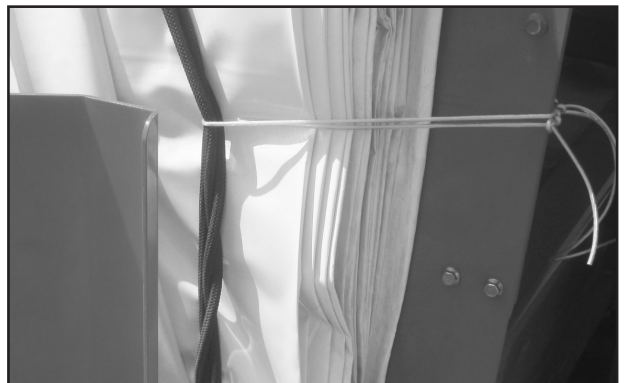


Figure 18 Fixed ropes detail



Figure 19 Ropes layout.



**IMPORTANT:** It is not necessary to remove the cradle to start working.

6) Before starting bagging, lower the rubber flap as shown in figure 20 in order to prevent grain from flowing back to the tray, that is, outside the grain bag.



Figure 20 - Rubber flap down

7) Level the machine by using the adjustable towbar as shown in figure 21.

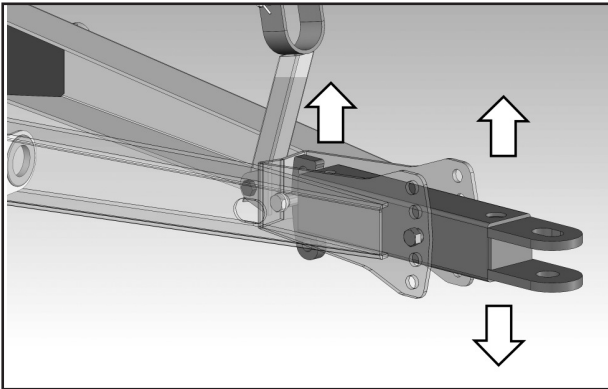


Figure 21 – Bagger levelled with towbar.



**WARNING:** Before approaching the grain conveying auger, check to see that the driveshaft is disconnected from the machine, in order to avoid accidental injuries while the auger is being inspected.

8) Before continuing with the preparation of the grain bag, check that the auger is completely free from obstructions along the tube, i.e. that it rotates freely. Figure 22 shows the front of the auger.

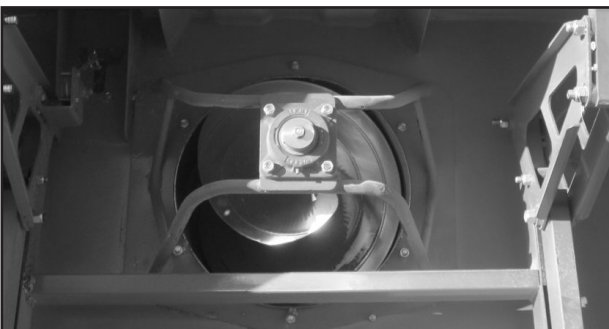


Figure 22 – Auger front

9) Close the end of the grain bag. Although the grain bag manufacturer usually gives instructions, paragraph 6-f “Closing the grain bag” offers general instructions on some of the possible closing methods. Both the closing at the front and at the end of the grain bag are very similar, but the front end must always be rolled downwards and held appropriately while the grain bag starts to fill in order to prevent the end from opening. This is necessary mainly due to the air blowing effect caused by the auger and the grain itself.

### 5-h. Final Adjustments Before Starting the Bagging

As indicated before, the machine driveshaft should be coupled to the tractor PTO only after the grain bag has been closed. Otherwise, the operator would be working on preparing the grain bag while the grain conveying auger is accessible and coupled to the PTO, which would involve a risk of being trapped in the case of its accidental operation from the tractor. Keeping in mind that the towbar is already linked to the tractor, proceed as follows:

1) Release the end of the driveshaft from its support on the bagging machine towbar as shown in Figure 23.

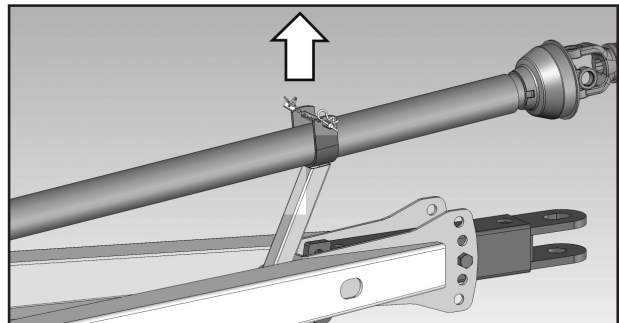


Figure 23- Released driveshaft

2) Extend the driveshaft and couple the splined end to the tractor PTO outlet shaft.

3) Fit the static plastic covers using the chains and locks provided for this purpose. The driveshaft should not be operated without these plastic protectors being properly fixed in place. All the safety warnings indicated on the driveshaft must also be observed.



**WARNING:** Always uncouple the driveshaft if any maintenance tasks must be performed on the machine.



## 6. BAGGING PROCEDURE

### 6-a. Operation Start-up

With the machine and grain bag prepared as explained in the previous section, the bagging operation can be started following these steps:

1) Prepare the vehicle that will supply the grain to be bagged (usually a self-unloading grain cart). This vehicle's discharge tube should be arranged as shown in Figure 1. The grain entering the bagging machine should fall as directly as possible into the centre of the receiving hopper. Otherwise, grain might hit the opposite side of the hopper and spill out.

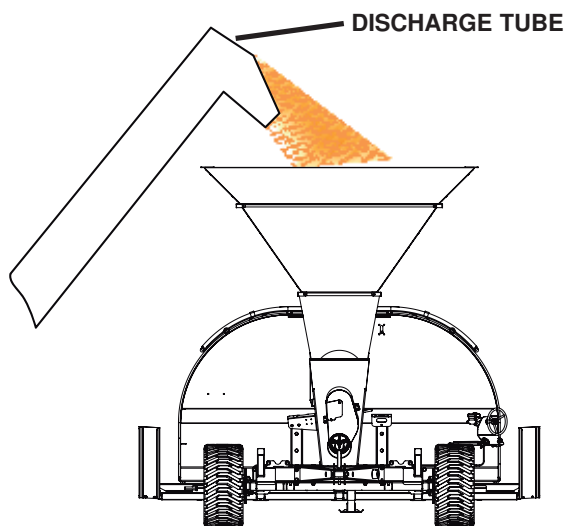


Figure 1 - Discharge tube position

2) Use a straight line as a reference along the route of the grain bag in order to avoid bends in its entire length. Otherwise, there is a risk of the material being overstretched in some areas, which might make it break later. Some possibilities are: use a distant, clearly-identifiable tree as a reference; lay a string tensed along the route; keep a constant distance from a wire fence.

3) Remember that both tires should be inflated to a pressure within the range recommended in paragraph 7. "Maintenance".

4) Check that the initial pressure of the hydraulic brake system is around 98.06 bar (9806.6 kPa).

5) Gradually operate the tractor PTO until it reaches its running speed, 540 RPM.



**IMPORTANT:** Always start up the PTO before beginning to introduce grain into the hopper in order to avoid over-loading the auger.



**WARNING:** When grain enters the receiving hopper and the grain bag end starts to become stressed, the bagging machine and the tractor will suddenly start to move. The operators must be ready for this moment.

6) Start feeding grain gradually, checking that the end of the grain bag is adequately filled and is lying evenly on the ground as shown in Figure 2. Remember that the front end of the grain bag must be turned over.

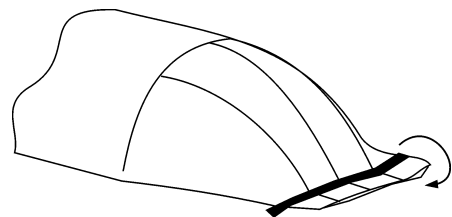


Figure 2 - Filling of the grain bag front end

Stop feeding grain as often as necessary in order to rearrange the end of the grain bag; it will be impossible to correct its position once it is fully loaded.

This initial control is very important so that the stress in the grain bag material is even once storage has been completed. The pressure on the end of the grain bag must not be excessive. Grain must keep its natural slope inside the grain bag end so as not to exert excessive force on the closure.

As the grain enters through the hopper, the auger will convey it to the end of the grain bag until the machine starts moving forward, pushing the tractor. This is a very important moment: the safety of the operators is the priority and care must be taken that, when the machine starts moving, it does not cause any injuries. The movement of the grain feeding vehicle must be coordinated so that grain continues easily entering the receiving hopper of the bagging machine.

## 6-b. Operation Parameters

1) The machine's braking force is directly related to the resulting stress in the grain bag: the pressure on the brakes should be adjusted so as to make the best use of the grain bag's storage capacity, i.e. to apply the greatest possible stress to the grain bag material according to the manufacturer's provisions. As shown in Figure 3, most grain bags have some kind of ruler or indication printed on their surface that can be matched with a measurement template supplied by the manufacturer in order to determine the degree of stress on the plastic material.

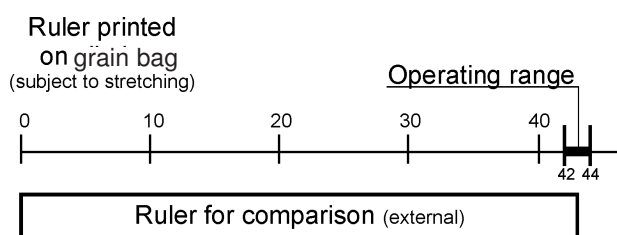


Figure 3 – Ruler printed on the silo bag

It is safer to stay in the centre of the grain bag's stretching range so as to allow for further grain settling.

2) Apart from checking this on the grain bag, it is most important not to exceed 147.09 bar (14 709.9 kPa) in the hydraulic brake system. The manometer has an indication of the operating pressure range.

3) If, despite the precautions explained in 5-b "Prior Checks in the Field", the bagging machine wheels skid due to wet ground or loose soil, the pressure of the hydraulic brake circuit must be reduced. As a last resort, if this is not enough, the tractor's brake can be used to contribute to braking both machines, but the purpose of the bagging machine wheels is to rotate, not to skid.

4) Make sure the grain bag is unfolded gradually, one fold at a time.

## 6-c. Protection against Overloads

In the machine's driveshaft intake there are mechanical fuses, consisting of screws that will break if there is any overload in the transmission.

These screws should never be modified under any circumstances, since they guarantee the

machine's integrity and its correct operation. In order to reestablish transmission, replace the broken screw using the indications given in the following table:

### Walterscheid driveshaft

Size	Grade	Type	Surface protection	Quantity
M8X1.25X60	10.9 DIN -ISO 931-960	Hexagonal head	Zinc- or cadmium-plated	1

### Bondioli & Pavesi driveshaft

Size	Grade	Type	Surface protection	Quantity
M10x1.5x50	10.9 DIN -ISO 931-960	Hexagonal head	Zinc- or cadmium-plated	1

If these screws break repeatedly, the causes provoking this should be investigated.

## 6-d. Interruptions during Bagging

If the bagging operation has to be temporarily interrupted, this procedure will have to be followed:

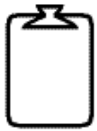
1) Stop feeding grain into the receiving hopper of the bagging machine. The auger should be left rotating in order to remove all the grain left inside the receiving hopper and the conveying tube.



**IMPORTANT:** Remember that the receiving hopper drives the cereal toward the auger. Do not use it for storage purposes.

2) Wait for a moment until the auger conveys all the remaining grain from the receiving hopper to the grain bag. The tractor and bagging machine will stop moving almost as soon as the hopper and the conveying tunnel are emptied. Operators should be ready for this sudden stopping of the machine and the linked tractor.

3) By this time, the auger will be rotating unloaded. Gradually, reduce PTO speed until it stops, when the auger will also stop rotating.



**IMPORTANT:** The auger should be completely free of grain when it is stopped, since any grain left there would produce an excessive load on the auger when it is started again.

4) Apply the tractor's hand brake as well, to make sure to prevent any grain bagger and tractor additional unexpected movement

5) If any maintenance, repair or inspection tasks need to be carried out on the machine, uncouple the driveshaft from the tractor PTO and prop it on the towbar end support as shown in the figure 4.

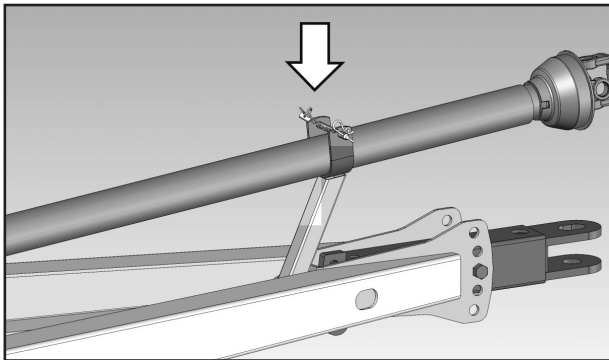


Figure 4 - Driveshaft propped on towbar end

6) If necessary to temporarily disengage the tractor from the bagging task, remove the pin from the tractor hitch.



**WARNING:** If the machine is left attached to a semi-prepared grain bag and the driving tractor is removed, care should be taken that the pressure of the hydraulic brake system does not fall. It is best to place wedges on both sides of the machine wheels in order to avoid unexpected movements.

### 6-e. Operation at the End of the Grain Bag

Most grain bags have some kind of indication printed on their surface, e.g. a colored stripe, to show that the bottom end is being reached. When this kind of indication appears, or when there are about 4 (four) grain bag folds left on the silo tunnel, proceed as follows:

- 1) Follow instructions 1, 2 & 3 from the previous paragraph, 6-d "Interruptions during Bagging".
- 2) Apply the tractor's hand brake.



**WARNING:** If the tractor's hand brake is not in a good condition, when the bagging machine brakes are released grain pressure might push the bagging machine and its linked tractor and the operators would not be able to control it. It is best to stop the tractor engine and leave it in a low gear.

3) Once the bagging machine is properly held by the tractor, release its own built-in brakes.

4) Gradually release the tractor's hand brake and use a low gear at the same time if necessary. In this way, the pressure exerted by the remaining cereal will push the bagging machine-tractor assembly forward an additional distance.

5) Tow the bagging machine using the tractor until the portion of the grain bag left on the machine's silo tunnel is finally released. The bottom end of the silo bag will then be completely free to be closed.

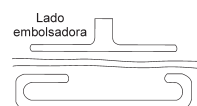
### 6-f. Closing the Grain Bag

Both the front end of the grain bag and its bottom end can be closed using different systems (see paragraph 5-g "Grain Bag Preparation and Mounting"). Instructions for these can usually be obtained from the silo bag manufacturers.

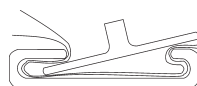
In general terms, the following grain bag closing methods can be explained.

#### Plastic Closure

This consists of a strip split in two halves, male and female, which trap both sides of a grain bag. This is a high-quality and quick closing method. This operation requires a special hand tool to lock the plastic seal. Proceed as shown below:



Insert the end of the grain bag into the "U" channel (female half of the plastic closure).



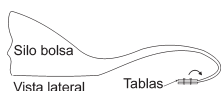
Mould the grain bag material until it fits into the "U" shape and locate the male half of the plastic seal.



Place the special tool with its roller in the centre of the seal and press on the male half until it is inserted into the female half.



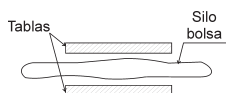
To close the seal completely, the roller must be run from one end of the width of the silo bag to the other.



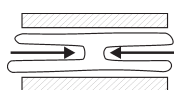
Rotate the plastic closure 2 or 3 times, also winding the grain bag.

### Wooden Boards

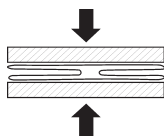
This is an economical solution, in which the materials to be used must be prepared adequately to prevent a precarious closing from causing an inadequate sealing. Do the following:



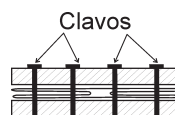
Arrange two wooden boards on the end of the silo bag to be closed.



Laterally fold the silo bag, reducing its width so that the boards cover all the material.



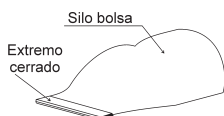
Join both boards checking that the entire silo bag width is pressed between them.



Nail the boards to each other.



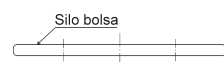
Rotate the board assembly 2 or 3 times, also winding the silo bag.



The sealing must have a compact look.

### Rope

This is a simple and economical method but it involves a loss of length, since the silo bag must be folded and turned over. The success of this method depends on the operator's skill. Do the following:



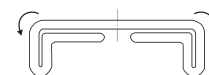
Visually divide the width of the end of the grain bag into 4 (four) parts.



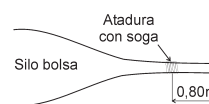
Fold the outside two fourths downwards.



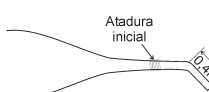
The grain bag end width will thus be reduced.



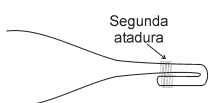
Continue folding the sides of the end downwards.



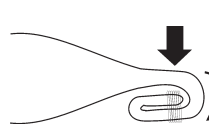
Tie the "roll" thus obtained with a rope located some 0.80 m (2.5') from the end of the grain bag.



Fold about 0.40 m (1.25') of this "roll" downwards.



Make a second tie with the rope at the same height as the initial tie.



If you are working on the initial end, fold the tie so that it is left under the grain as the grain bag starts to fill.

When you are closing the initial end of the grain bag, it must be held down properly with some weight while it starts filling. This is necessary due to the air blowing effect produced by the auger, even before the grain enters the receiving hopper.

## 7. MAINTENANCE

The machine is simple, so the only maintenance tasks necessary are the following.

### 7-a. Maintenance Schedule

The following tables show the maintenance tasks that have to be carried out periodically.

#### Daily Tasks

All the tasks indicated as “daily” should be carried out before starting every workday, and the ones indicated as “weekly” should also be carried out when there is any significant change in the conditions of work (change of silo bag, change of grain).

It is very important to keep a written record of all the maintenance tasks performed on the machine.

Condition to check	Normal situation	Correction method
General machine condition	Free movements in general, reasonable cleanliness of main components	Eliminate causes of possible restrictions on the movements; remove any dirt that could hinder the machine's operation.
Condition of the conveying auger tube	Free from obstructions or excessive dirt	Eliminate possible obstructions or dirt left inside the tube.

#### Weekly Tasks

Condition to check	Normal situation	Correction method
Tire pressure	Between 2,4 and 2,7 bar (36 and 40 lb/pulg <sup>2</sup> ), both tires at the same pressure	Adjust tire pressure

#### Half-yearly Tasks

Condition to check	Normal situation	Correction method
Tightening torque for the clamps holding the lifting cable to the parallelogram assembly.	Clamp nuts tightened	Tighten the nuts, torque 2 kgm (20 Nm)
Condition of the hoist steel cable	Not more than 3 wires cut on a single strand. Not more than 6 wires cut on all the strands along an entire pitch.	Replace the cable as indicated in paragraph 7-d, under the title “Hoist Cable Replacement”.
Operation of auger support bearings	Silent rolling, free from bumps or abnormal vibrations	Grease the bearings using the grease fittings supplied for this purpose. Use NLGI grade 2 lithium grease. If the problem is not solved, dismantle and evaluate possible replacement according to the instructions given in paragraph 7-d., under the title “Auger Support Bearing Replacement”.



## 7-b. Maintenance after Receiving the Machine

After some 30 hours of continuous operation, it is essential to re-tighten all the machine's screws using the following torque values recommended for SAE grade 5 zinc-plated screws:

Size	Torque [ kgm - N.m (ft.lb) ]	
1/ 4" - 20	0,96 - 9,5	(7,03)
5/16" - 18	2,03 - 20	(14,81)
3/ 8" - 16	3,61 - 35,5	(26,29)
7/16" - 14	5,81 - 57	(42,22)
1/ 2" - 13	8,86 - 87	(64,44)
9/16" - 12	12,74 - 125	(92,59)
5/ 8" - 11	17,58 - 172	(127,77)
3/ 4" - 10	31,29 - 307	(227,40)

After some 15 hours of operation check the chain tension and adjust if necessary.

### Chain tension:

Adjust the chain until the free strand can move freely 3/8" to 5/8" (10 to 15 millimeters) using light hand force.

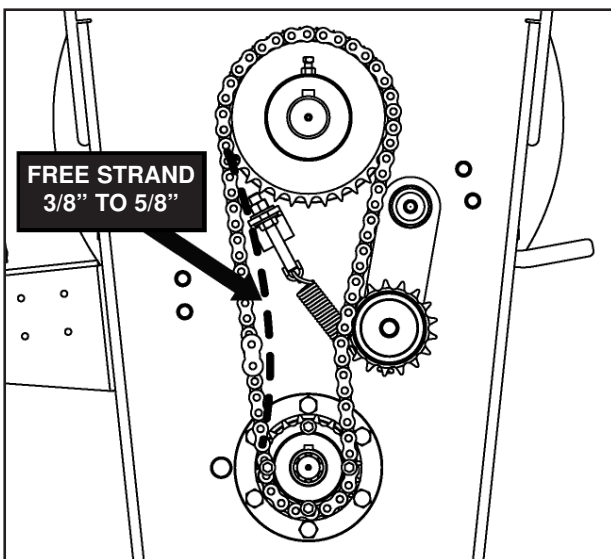


Figure 1 - Proper chain tension

## 7-c. Lubrication

NLGI grade 2 lithium (multiple-purpose automotive) grease is recommended for all the lubrication points.

## 7-d. Replacement of Parts Subject to Wear

### Hoist Cable Replacement

- 1) Operate the winch until the cradle reaches the ground. (cable should have no tension)
- 2) Remove the cable holders on each end of the cable.
- 3) Remove the old cable and place the new one. This new cable should have the same characteristics as the one used by the manufacturer.
- 4) Lift and lower the cradle system several times to check for proper cable installation

### Auger Support Bearing Replacement

- 1) Identify the UC 209 bearing and release the Allen studs that fix it to the rear shaft end.
- 2) Remove the hex head screws (3/4") from the support to remove it. Care must be taken to prevent the auger from falling suddenly on the support.
- 3) Insert the UC 209 bearing on the rear shaft end. Then, position the support and tighten the hex head screws (3/4") on the rear support.
- 4) Tighten the Allen studs that fix the bearing.

## 7-e. Brake Fluid

Brake fluid level should regularly be checked. The tank should be at half point approximately. Brake fluid should be Type 3.

## 7-f. Wear Prevention on Flexible Pipes

Take into account the following items for a better use and take care of the flexible pipes included in the machine.

- Visually inspect each one of the brake hydraulic circuit components and hoses. They should not have leakages: Keep them from touching sharp objects. Do not tread on hoses and keep them from being strangled.
- Be careful when working with brake liquid, since it can cause burns on your skin and wearing on metal parts.
- Check the helical cover on the hydraulic circuit is in good condition in order to prevent the operator from being splattered with fluid

## 7-g. Tire Change

Follow the below steps:

- 1) Slightly loosen the wheel nuts.
- 2) Lift the machine using a mechanical or hydraulic jack applied to the chassis in the location indicated by the decal, as shown in Figure 2.

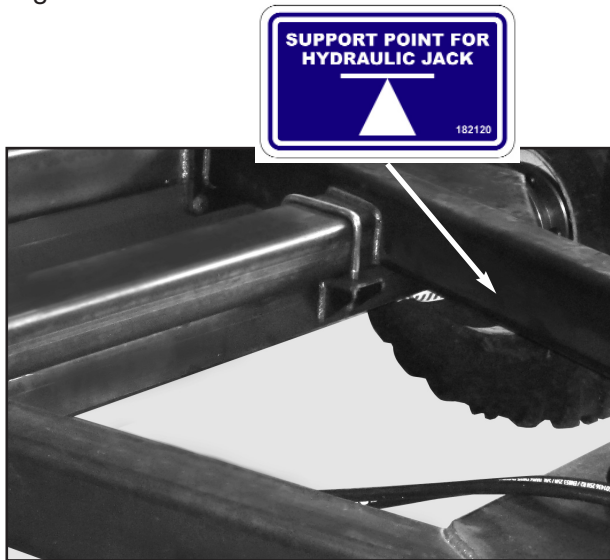


Figure 2 - Support point for jack location

- 3) Once the bagging machine has been lifted, install the assembled wheel and the five wheel nuts .
- 4) Tighten the wheel nuts using a 1 1/2" hexagonal wrench up to a final tightening torque of 31.3 kg x m= 307 N x m= 227 lbs x ft.



**IMPORTANT:** Remember to re-tighten wheel nuts during the first 3 weeks for them to fit better on the wheel rims.



**IMPORTANT:** In case of inconvenience with the sliding of the tray tracks, use a brush to grease the sliding inner tube with a thin layer of grease.





## 8. MACHINE TRANSPORTATION AND STORAGE

### 8-a. Preparation of the Machine for Transport

Once the grain bag has been released from the bagging machine, prepare the machine for transportation in the following way:

- 1) Uncouple the driveshaft from the tractor PTO and put it on the towbar support.
- 2) If not been done yet, lift the cradle and put the latch.
- 3) Raise the tray to the fullest.
- 4) Check both brakes are completely released, i.e. there must be no pressure in the hydraulic system.
- 5) If necessary, use the towbar (adjustable) to adjust the machine inclination.
- 6) After coupling the machine to the tractor, check the support leg is placed as indicated in decal 026315. In the bagger without televeyor, the support leg is placed in the chassis, rotated upwards 180° (figure 1), whereas in the bagger with televeyor it is placed in the towbar, rotated upwards 90° (figure 2).



Figure 1 – Support leg - bagger without televeyor.



Figure 2 – Support leg - bagger with televeyor.

### 8-b. Transportation

The bagging machine requires no special configuration changes apart from the ones explained in paragraph 8-a. "Preparation of the Machine for Transportation". Figure 3 shows the machine ready for transport and also indicates the towbar hitch. The maximum force that should be exerted on the tractor hitch pin is 650 N. Brake hydraulic circuit should remain with no pressure.

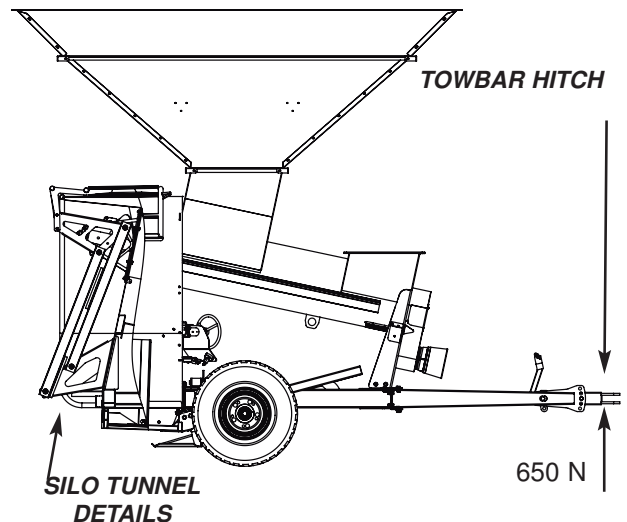


Figure 3 – Bagging machine ready for transport

**IMPORTANT:** The **GTX 3230** grain bagger is not designed for road travel. Therefore, **MICRON FRESAR S.R.L.** accepts no liability for accidents or damage that may be caused during transport if the machine is made to travel on roads.



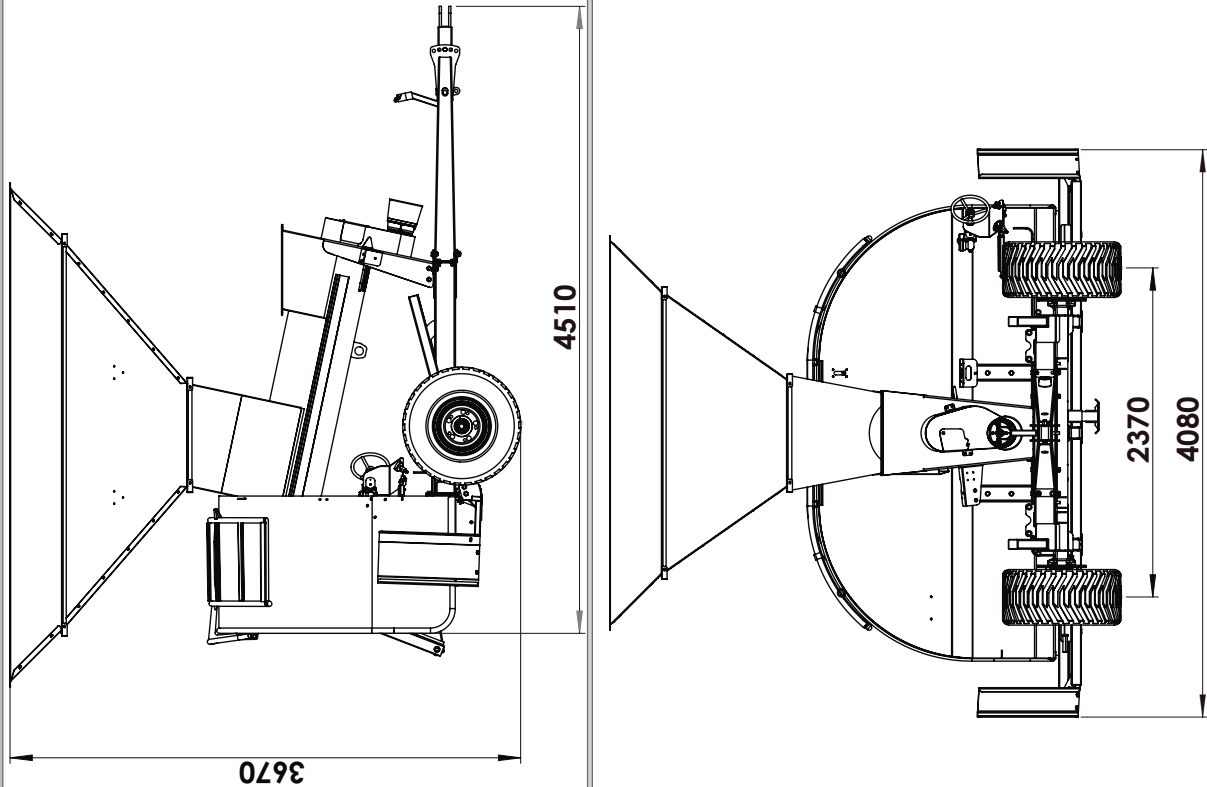
If the user still needs to do this, we recommend consulting national, provincial and municipal safety regulations in force in each region.

### 8-c. Machine Storage

Before storing the bagging machine, ensure that the brake hydraulic system is left without pressure. If the machine is expected to be stored for several days, it is important to adequately grease all the moving parts.

The machine must be stored indoors in a clean and dry place, preferably with a cover to protect it from dirt. If the bagging machine is to stay outdoors temporarily, the lower auger cover should be left open.



9. SPECIFICATIONS	DIMENSIONES
<p><b>9-a. List of Main Components</b></p> <p>32000 bu/hr capacity (bagger only).</p> <p>Can fit a Ø 10 ft x 330 ft bag</p> <p><u>Tare:</u> 1900 kg (4188 lb).</p> <p><u>Tunnel:</u> For grain bags up to 10 feet.</p> <p><u>Operation:</u> 80 HP tractor equipped with a 540 rpm PTO.</p> <p><u>Tube / auger:</u> 20" .</p> <p><u>Braking system:</u> Hydraulic, with built-in manual pump.</p> <p><u>Towbar height adjustment:</u> Enough to absorb differences in the hitch.</p> <p><u>Transport position:</u> No wheel configuration changes are required.</p> <p>The loading capacity of the machine is based on standard grain moisture (wheat at 13% moisture content). Bagging speed should be slowed down when bagging grain at 17% moisture or higher, otherwise the higher demand of horse power can break the PTO overload shear pin. The PTO must always run at 540 rpm.</p>	 <p>The technical drawing consists of two views of the grain bagger. The top view is a side profile showing the machine's width and height. It has a width dimension of 3670 and a height dimension of 4510. The bottom view is a front profile showing the machine's length and wheel spacing. It has a wheel-to-wheel distance dimension of 2370 and a total length dimension of 4080. Both views show the hopper, auger, and bagging mechanism.</p>



## **10. PRODUCT DISMANTLING AND DISPOSAL**

The following is meant to inform the user about the steps to follow when the lifespan of the machine, of its fluids or components comes to an end. Dismantling and disposal instructions are included.

- Metal parts or assemblies replaced or modified for particular reasons such as corrosion or wear should be properly disposed of. They should be sent to scrap storehouses or foundries where they can receive an adequate treatment. It is essential to wear personal protective equipment (safety gloves) when handling sheet steel.
- The system fluids which are periodically replaced (non-biodegradable hydrocarbon-derived oils and greases) should not be disposed of in the soil or in water courses, since this would result in environmental pollution. Up to now, the most usual application for these wastes is to use them as fuel for vapor generators (boilers) burning fuel-oil. They may also be burnt in special waste-burning kilns. Otherwise, they should be delivered to companies authorized to handle and transport them.
- Some practical use may be found for tires when they are removed from the machine after becoming worn out. Otherwise, they should be taken to a tire-recycling centre for their medium- or long-term integration into the ecological cycle according to national, provincial and municipal regulations in force.



## 11. GUARANTEE TERMS

**Micrón Fresar S.R.L** guarantees the **AKRON® GTX 3230** grain bagging machine for a one-year period since the date in which the new unit is delivered to the customer. This guarantee covers defects in materials used to manufacture the machine, provided that the grain bag unloader has been properly operated. The operating procedures considered appropriate are those described in this manual.

### **This guarantee does not cover the following:**

Damages or failures as a result of improper operation or lack of machine maintenance that may occur during transport, operation, or parking from the delivery date.

Tires own guarantee.

Normal wear of parts due to their use. Their replacement is part of the preventive maintenance.

**Micrón Fresar S.R.L** is not responsible for any repair made by third parties, or damages resulting from this cause.

**Micrón Fresar S.R.L**, reserves the right to modify the guarantee terms without previous notice.

**Micrón Fresar S.R.L** reserves the right to modify specifications and designs without previous notice and without the obligation to implement these changes in the machines already delivered.

Damages caused during machine operation by any person whose abilities are affected or reduced will not be covered.

If the machine is sold by the first owner within the guarantee term validity, this will be transferred to the new owner, provided that **Micrón Fresar S.R.L** is advised by written notice. Such guarantee will not be valid if the current owner of the machine (not being the original buyer of the product) has not advised **Micrón Fresar S.R.L** in due time.

The guarantee will automatically become invalid if any of the parts of the machine is modified or replaced by spare parts not provided by **Micrón Fresar S.R.L**. If such replacement or structural modification was urgently necessary, the user must obtain written approval from **Micrón**

**Fresar S. R. L.** to make such changes without affecting these guarantee terms.

In order for the guarantee to come into force, it is an essential condition to submit a request for guarantee repair together with the following information:

Name:

Date in which the damage occurred:

City:

Phone Number:

Machine Model:

Serial Number:

Invoice Number:





## 12. ALPHABETICAL INDEX

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### 13. SPARE PARTS LIST

All the components of the **AKRON GTX 3230** grain bagger are detailed in the following pages. To order a spare part for your machine, do the following:

- Use the attached exploded diagrams, from identify the component/s to be replaced.
- Note the code of each part and, if possible, the name of each assembly.
- Order the spare parts from your nearest **AKRON®** Technical Representative or to **AKRON®** Spare Parts Service (see 13-a “Information to Obtain Spare Parts”), indicating each part's code and, if possible, the name of each assembly.
- If replacing a part that originally included safety decals, check that these are also present on the replacement part.

#### 13-a. Information for Obtaining Spare Parts

**AKRON®** Spare Parts Service  
**Micrón Fresar S.R.L.**  
Rosario de Santa Fe 2256  
X2400EFN - San Francisco (Córdoba)  
ARGENTINA  
Tel: +54 3564 498502  
E-mail: [export@akron.com.ar](mailto:export@akron.com.ar)  
[www.akron.com.ar](http://www.akron.com.ar)

The nearest **AKRON®** Technical Representative can also be contacted to obtain machine components.

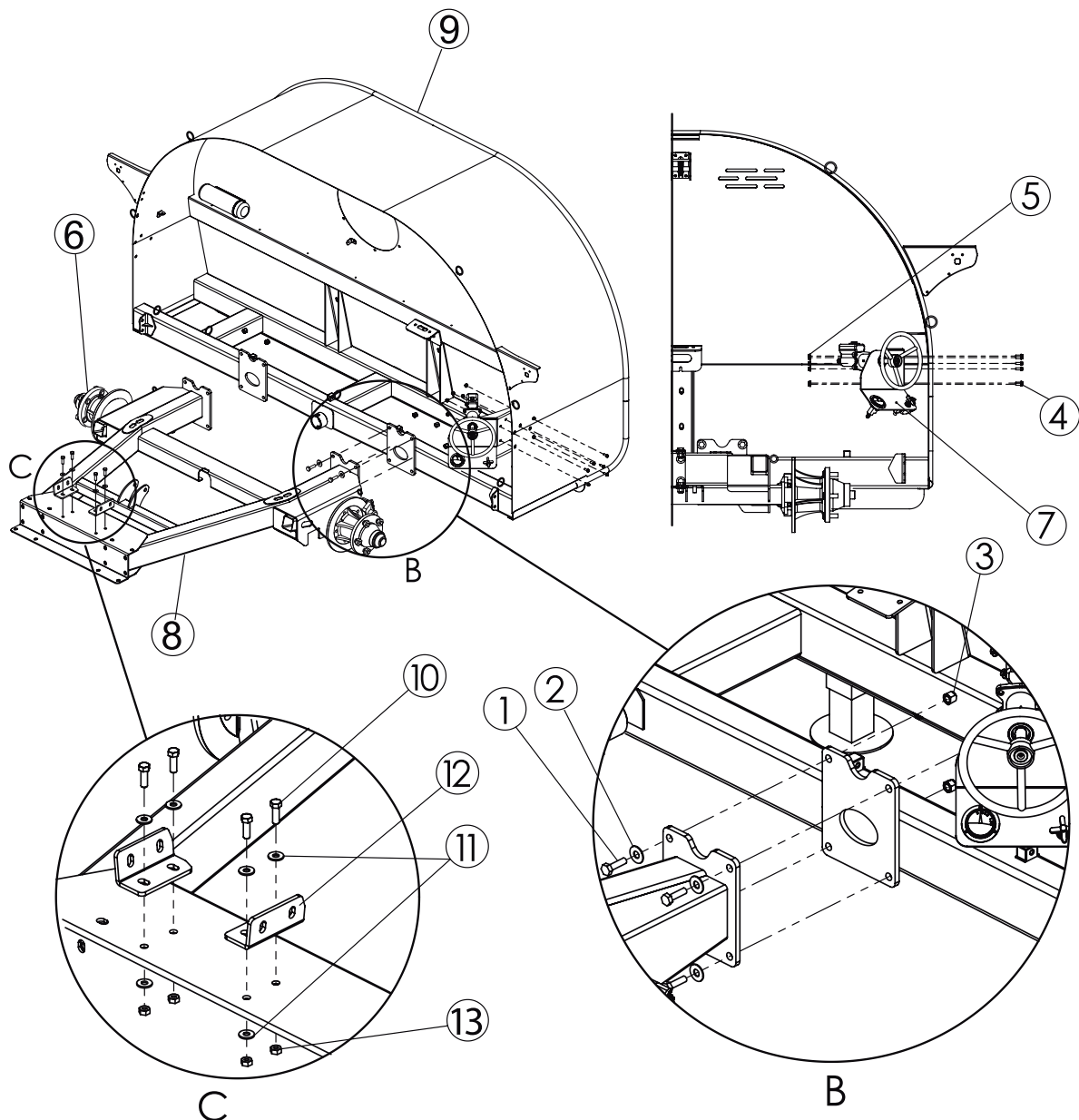


# **GTX 3230 ASSEMBLY**



**ASSEMBLY STEP # 1**

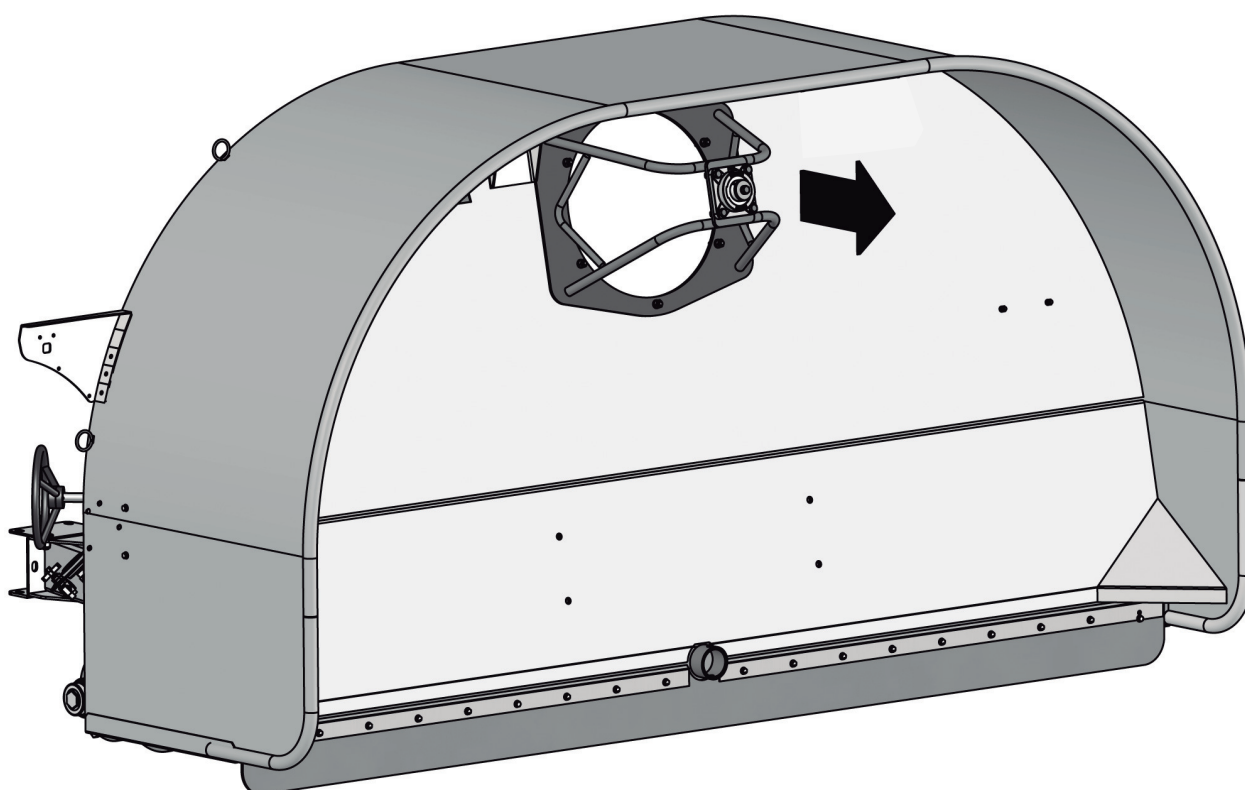
#	PART#	DESCRIPTION	QTY.
1	98.002.158051	HEX HEAD SCREW G5 5/8" X 2" BSW	8
2	98.309.101158	CADMIUM PLATED FLAT WASHER, 5/8"	8
3	98.304.110158	LOCK NUT 5/8"-15 BSW	8
4	98.002.095032	HEX HEAD SCREW G5 3/8" X 1 1/4" BSW	6
5	98.304.151095	HEX LOCK NUT, 3/8" BSW	6
6	29.39.28130	6 T HUB	2
7	29.39.28838	BAGGER BRAKE DRIVE	1
8	29.29.30100	CHASSIS + ASSEMBLED AXLE	1
9	29.29.30200	CHASSIS AND TUNNEL	1
10	98.002.127038	HEX HEAD SCREW G5 1/2" X 1 1/2" BSW	8
11	98.309.101127	1/2" ZINC PLATED FLAT WASHER	16
12	29.42.28109	COLUMN SUPPORT	2
13	98.304.151127	LOCK NUT, G5 1/2" BSW	8



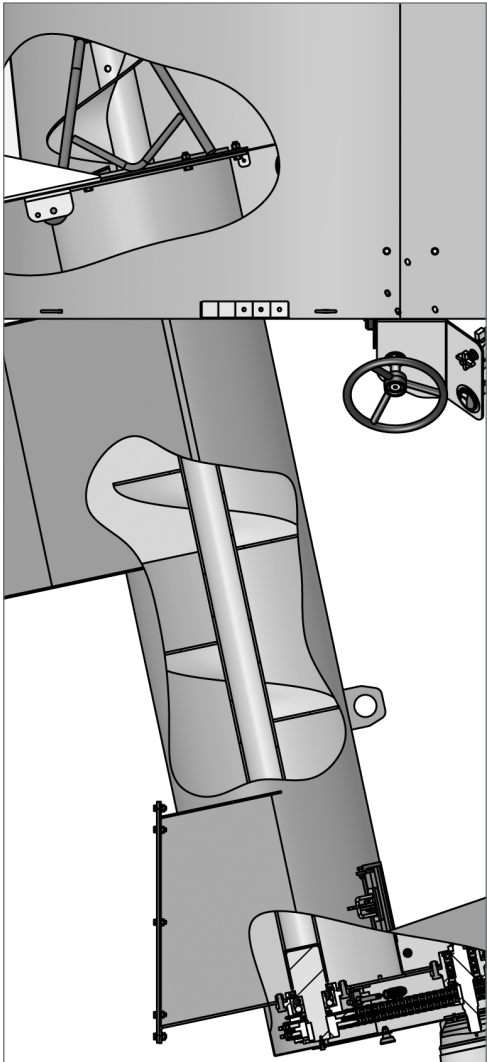


**ASSEMBLY STEP # 2**

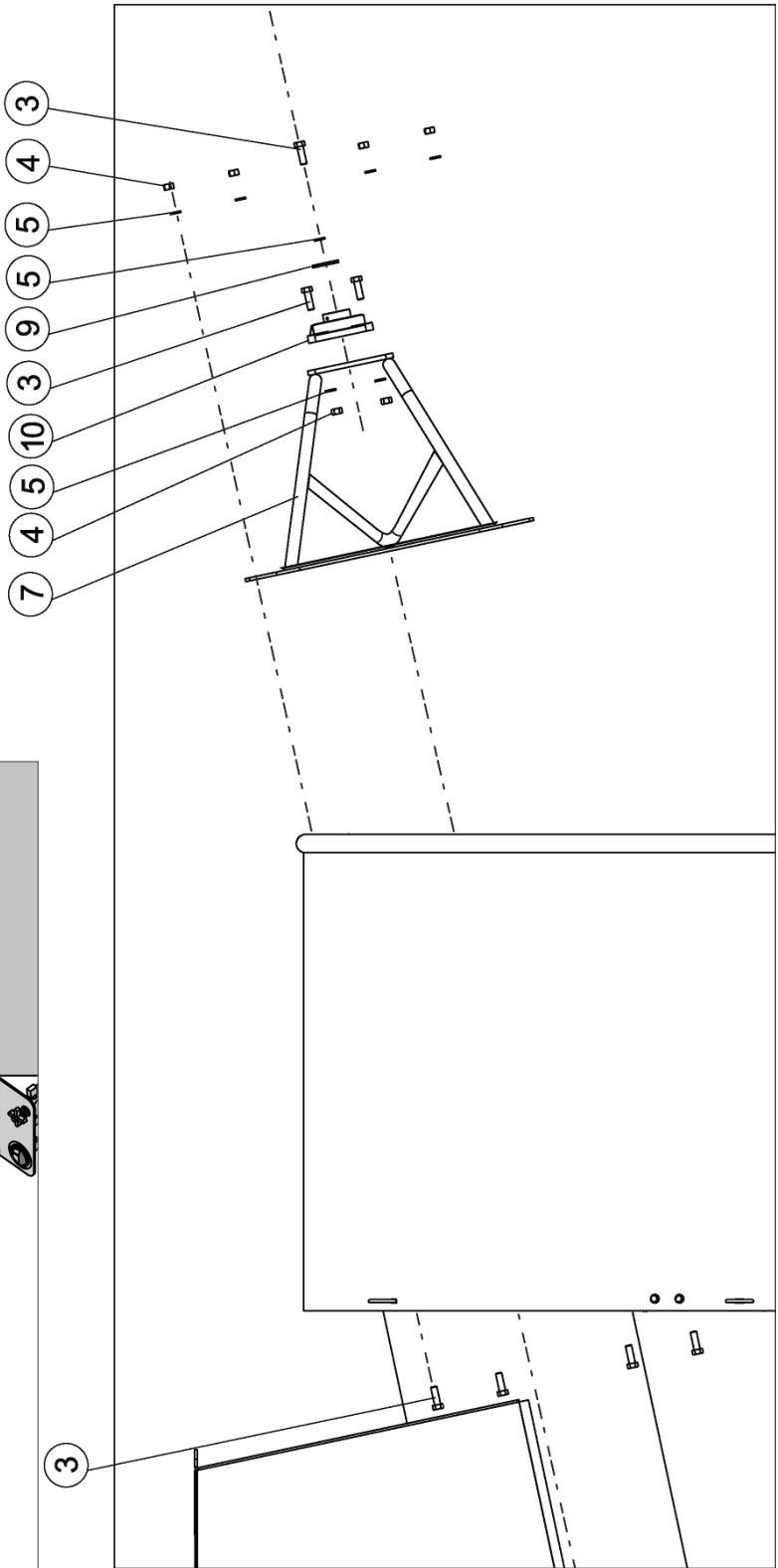
#	PART#	DESCRIPTION	QTY.
1	98.304.151127	SELF-LOCKING NUT, G5 1/2" BSW (BAG N°1)	4
2	98.309.101127	1/2" ZINC PLATED FLAT WASHER (BAG N°1)	8
3	98.002.127038	HEX HEAD SCREW G5 1/2 X 1 1/2 BSW (BAG N°1)	15
4	98.301.150127	HEX NUT G5 1/2" BSW	10
5	98.310.100127	GROWER WASHER 1/2"	11
6	29.43.28372	REVOLVING RING BUSHING W/ TELEVEYOR	4
7	29.39.27360	AM-45 SUPPORT ASSEMBLY	1
8	29.39.28336	TUBE-COLUMN ASSEMBLY	1
9	29.43.80417	END BUSHING STOP WASHER	1
10	29.39.26343	AM 45 SUPPORT WITH BEARING	1
11	98.002.095032	HEX HEAD SCREW G5 3/8"x1 1/4" BSW	12
12	29.42.28371	GRAIN DEFLECTOR W/ TELEVEYOR	1
13	98.304.151095	LOCK NUT, 3/8" BSW	12
14	98.309.100095	FLAT WASHER 3/8"	12
15	98.002.127051	HEX HEAD SCREW G5 1/2" X 2" BSW (PACK N°9)	4
16	98.304.151127	LOCK NUT G5 1/2" BSW (PACK N°9)	4
17	29.42.28346	FRONT HOPPER UPPER PANEL FOR BAGGER W/ TELEVEYOR	1
	29.42.28358	FRONT HOPPER COVER FOR BAGGER W/O TELEVEYOR.	1



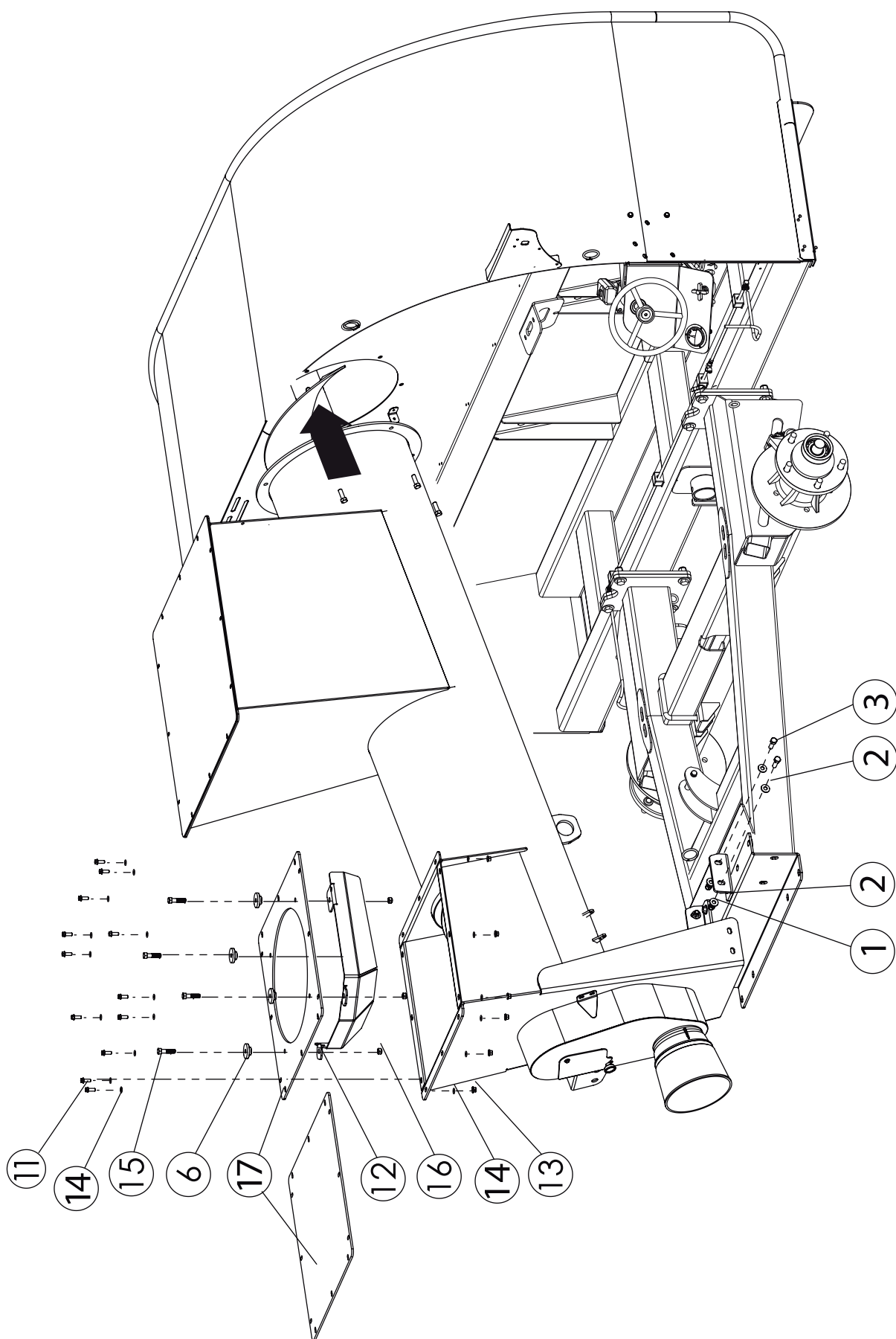
ASSEMBLY STEP # 2



INNER DETAIL

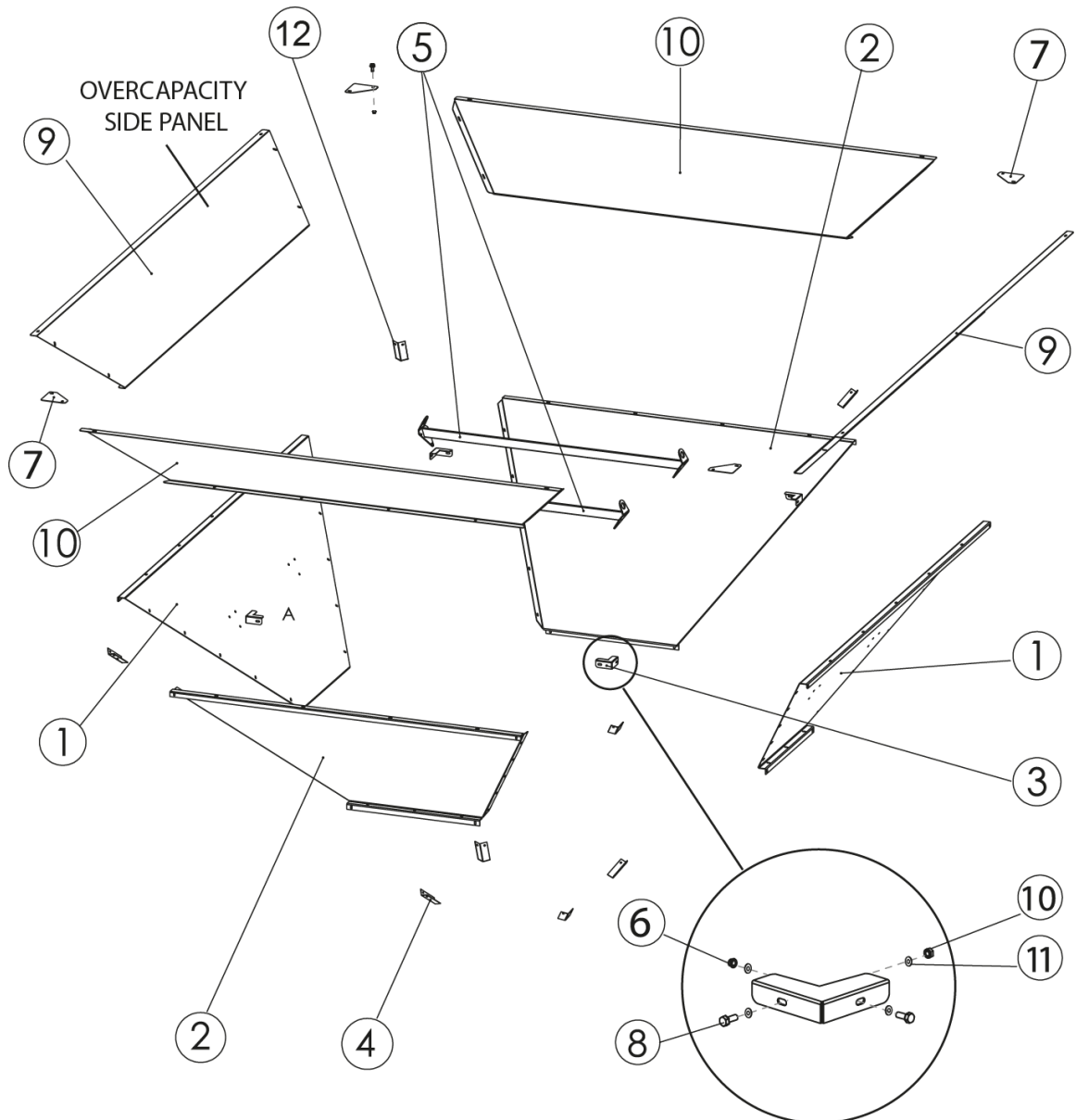


## ASSEMBLY STEP # 2

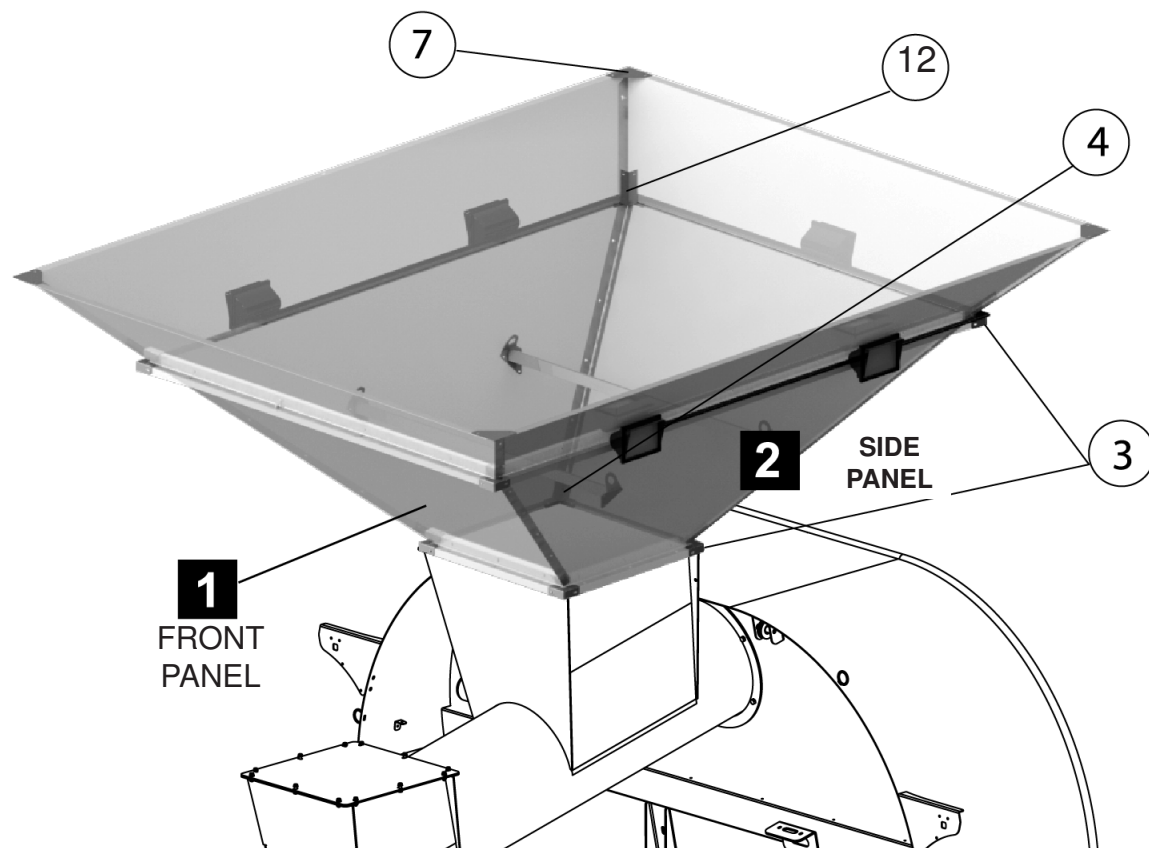
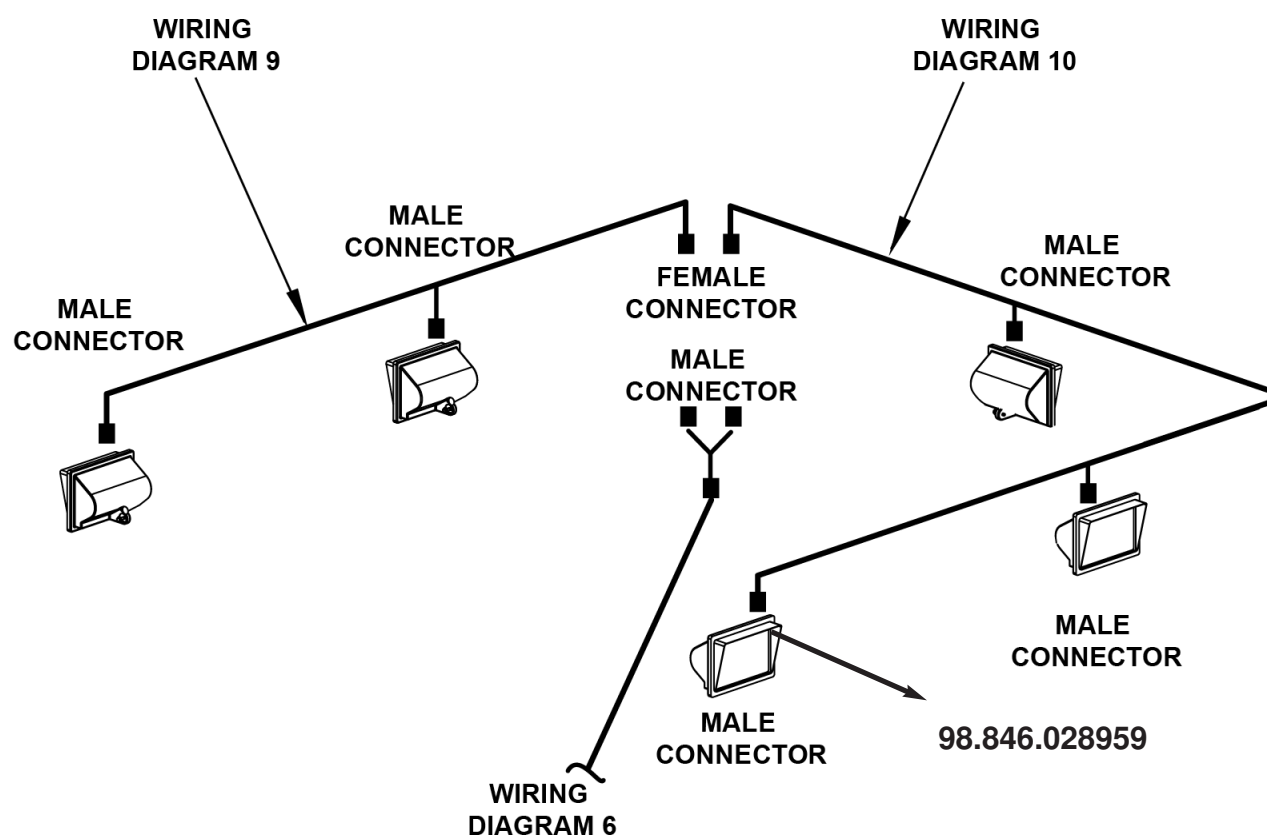


**ASSEMBLY STEP # 3**

#	PART#	DESCRIPTION	QTY.
1	29.42.27452	SIDE PANEL	2
2	29.42.27453	FRONT PANEL	2
3	29.42.26406	LOWER CORNER PLATE	8
4	29.42.27454	HOPPER ANTI-SPILL BRACE	4
5	29.39.27460	CROSSBAR	2
6	98.304.151079	LOCK NUT G5 5/16" BSW	80
7	29.42.27479	UPPER CORNER BRACE	4
8	98.002.079025	HEX HEAD SCREW G5 5/16" X 1" BSW	80
9	29.42.27476	OVERCAPACITY SIDE PANEL	2
10	29.42.27477	OVERCAPACITY FRONT/ REAR PANEL	2
11	98.309.100079	FLAT WASHER 5/16"	160
12	29.42.27455	OVERCAPACITY BRACE	4



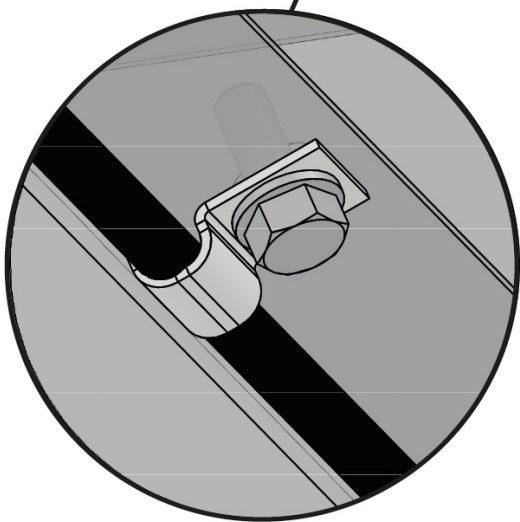
## ASSEMBLY STEP # 3



CLAMPS FOR HOPPER ELECTRICAL WIRING

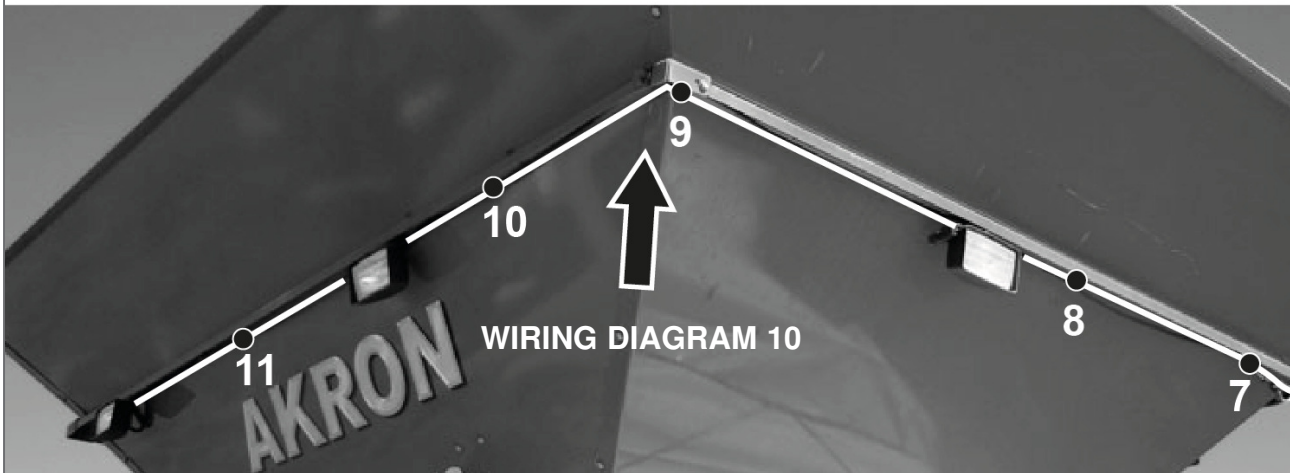


RIGHT SIDE VIEW



FOR HOPPER ELECTRICAL WIRING, IT IS NECESSARY TO PUT 11 CABLE CLAMPS INSTALLED AS SHOWN IN THE PICTURE.

**98.365.027480: CABLE CLAMP, 3/8"**

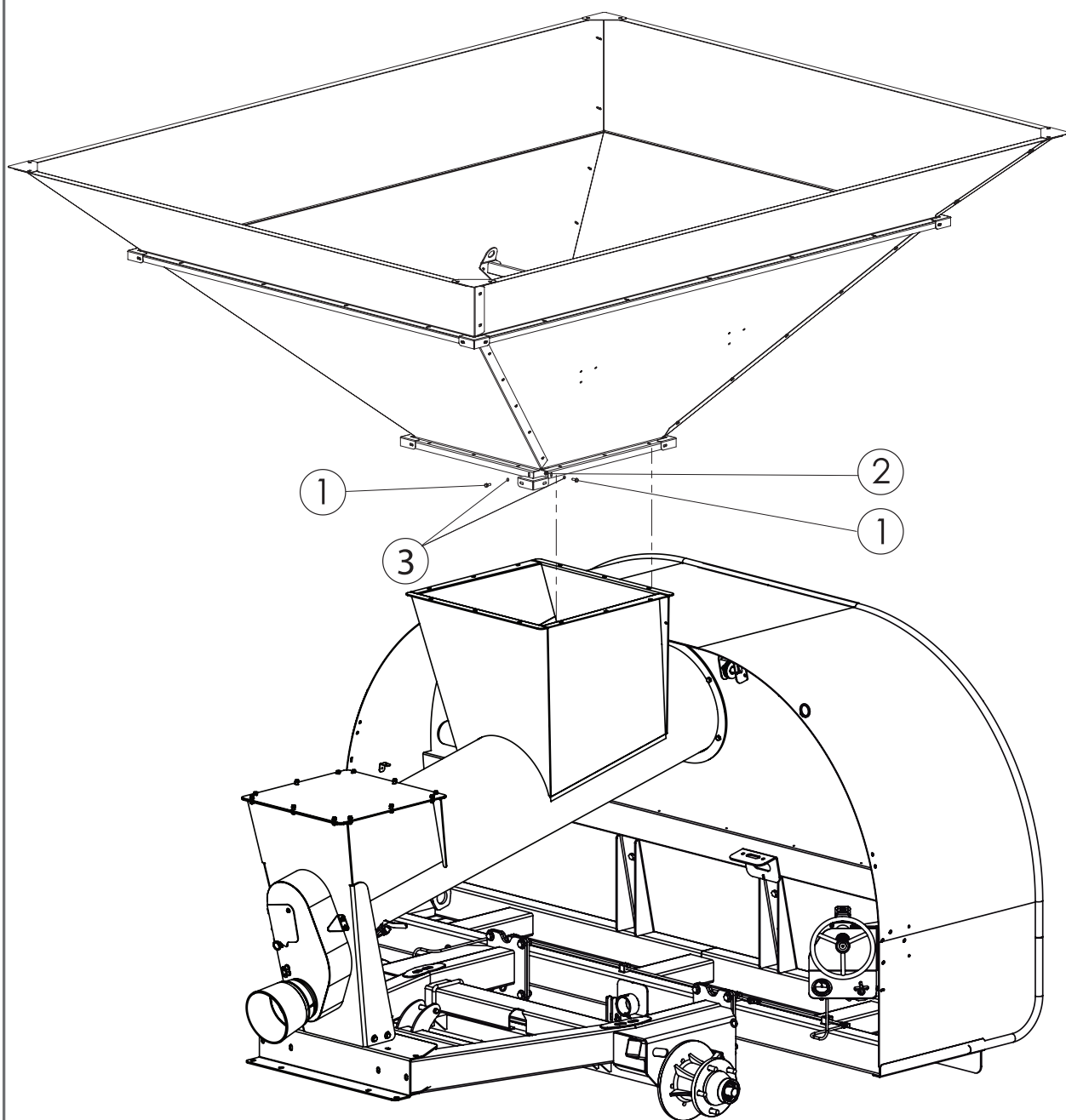


LEFT SIDE VIEW



**ASSEMBLY STEP # 4**

#	PART#	DESCRIPTION	QTY.
1	98.002.079022	HEX HEAD SCREW G5 5/16" x 7/8" BSW	20
2	98.304.151079	LOCK NUT G5 5/16" BSW	20
3	98.309.100079	FLAT WASHER 5/16"	40

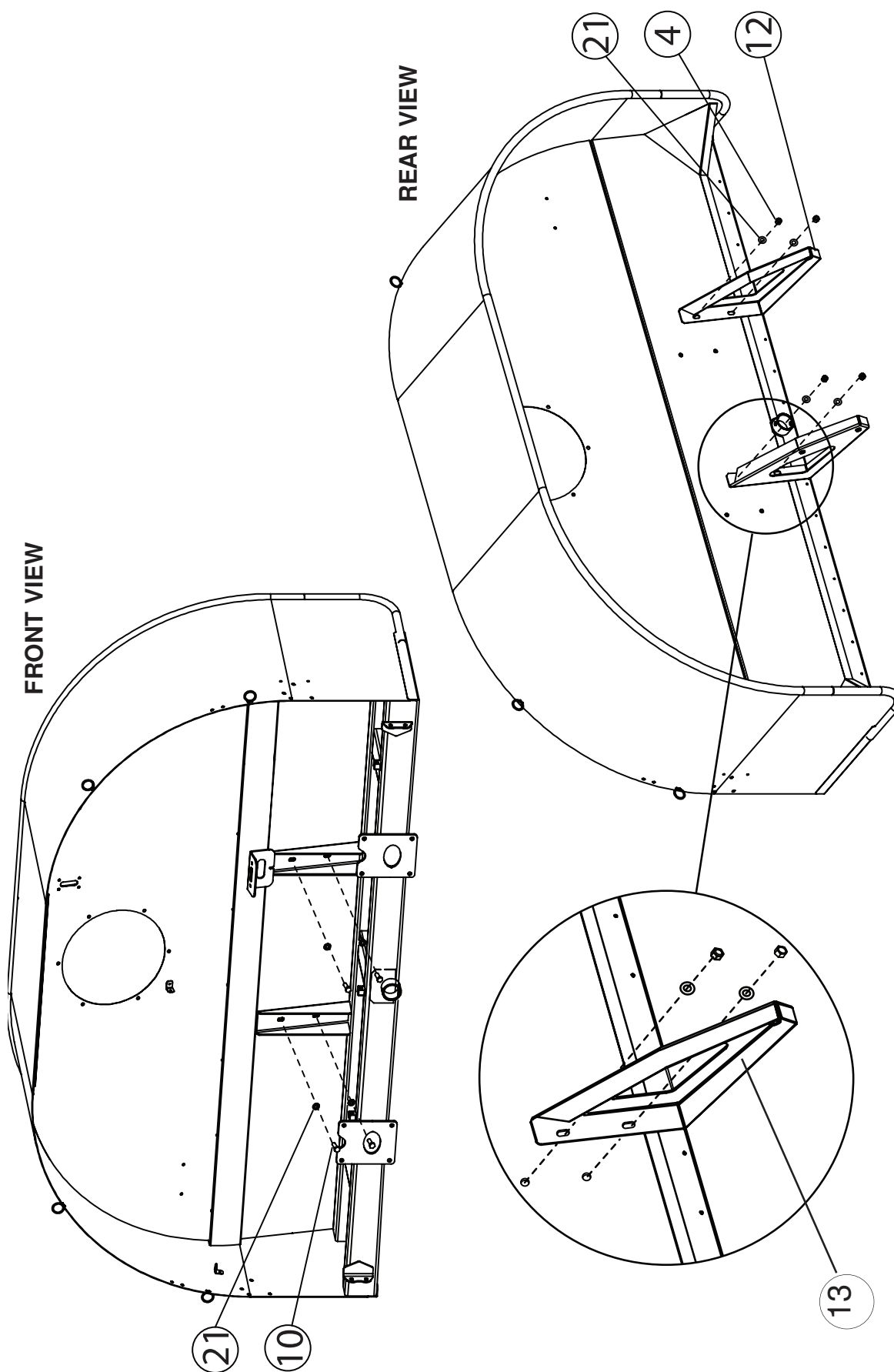




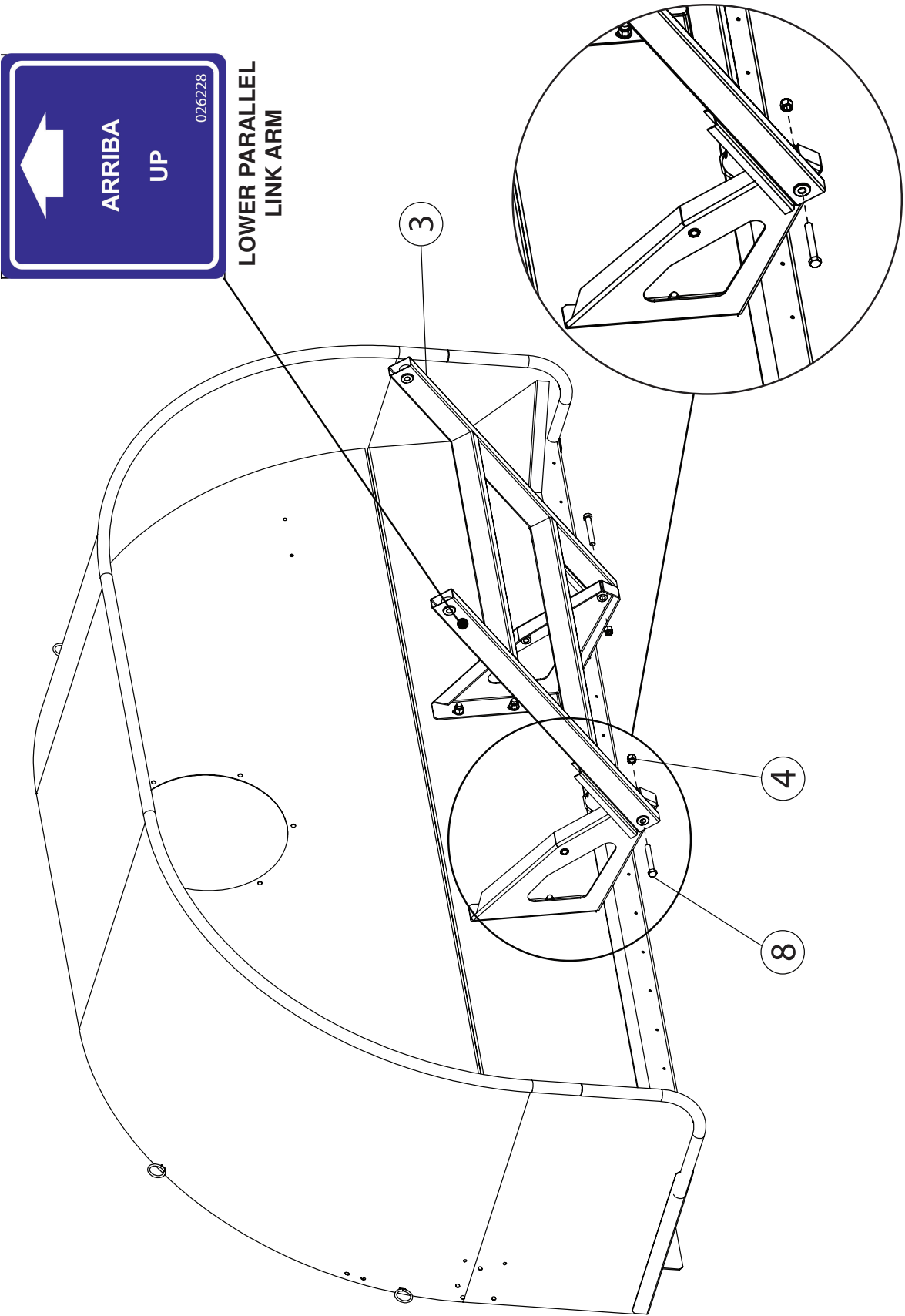
**ASSEMBLY STEP # 5**

#	PART#	DESCRIPTION	QTY.
1	29.39.30540	CRADLE	1
2	29.39.28570	CRADLE LEFT SUPPORT W/LATCH	1
3	29.39.27550	EASY-LIFT ARM	1
4	98.304.110158	SELF-LOCKING NUT, 5/8"-15 BSW	16
5	98.342.027568	CRADLE LEAF SPRING	2
6	29.39.28565	CRADLE LEFT BRACE	2
7	98.002.158102	HEX HEAD SCREW, G5 5/8" X 4" BSW	6
8	98.002.158114	HEX HEAD SCREW, G5 5/8" x 4 1/2" BSW	6
9	29.43.27577	CRADLE BUSHING	4
10	98.002.158044	HEX HEAD SCREW, G5 5/8" X 1 3/4" BSW	4
11	98.002.127102	HEX HEAD SCREW, G5 1/2" X 4" BSW	1
12	29.39.28586	EASY-LIFT RIGHT SUPPORT	1
13	29.39.28585	EASY-LIFT LEFT SUPPORT	1
14	29.39.27555	EASY-LIFT ARM	1
15	29.39.28567	CRADLE RIGHT BRACE	2
16	29.39.28580	CRADLE PULLEY ASSEMBLY	1
17	98.304.110127	SELF-LOCKING NUT, 1/2" BSW	4
18	98.002.127089	HEX HEAD SCREW, G5 1/2" x 3 1/2" BSW	2
19	9.43.27579	CRADLE LEAF SPRING BUSHING	2
20	29.39.27570	CRADLE LATCH	1
21	98.309.100158	FLAT WASHER 5/8"	16

## ASSEMBLY STEP # 5

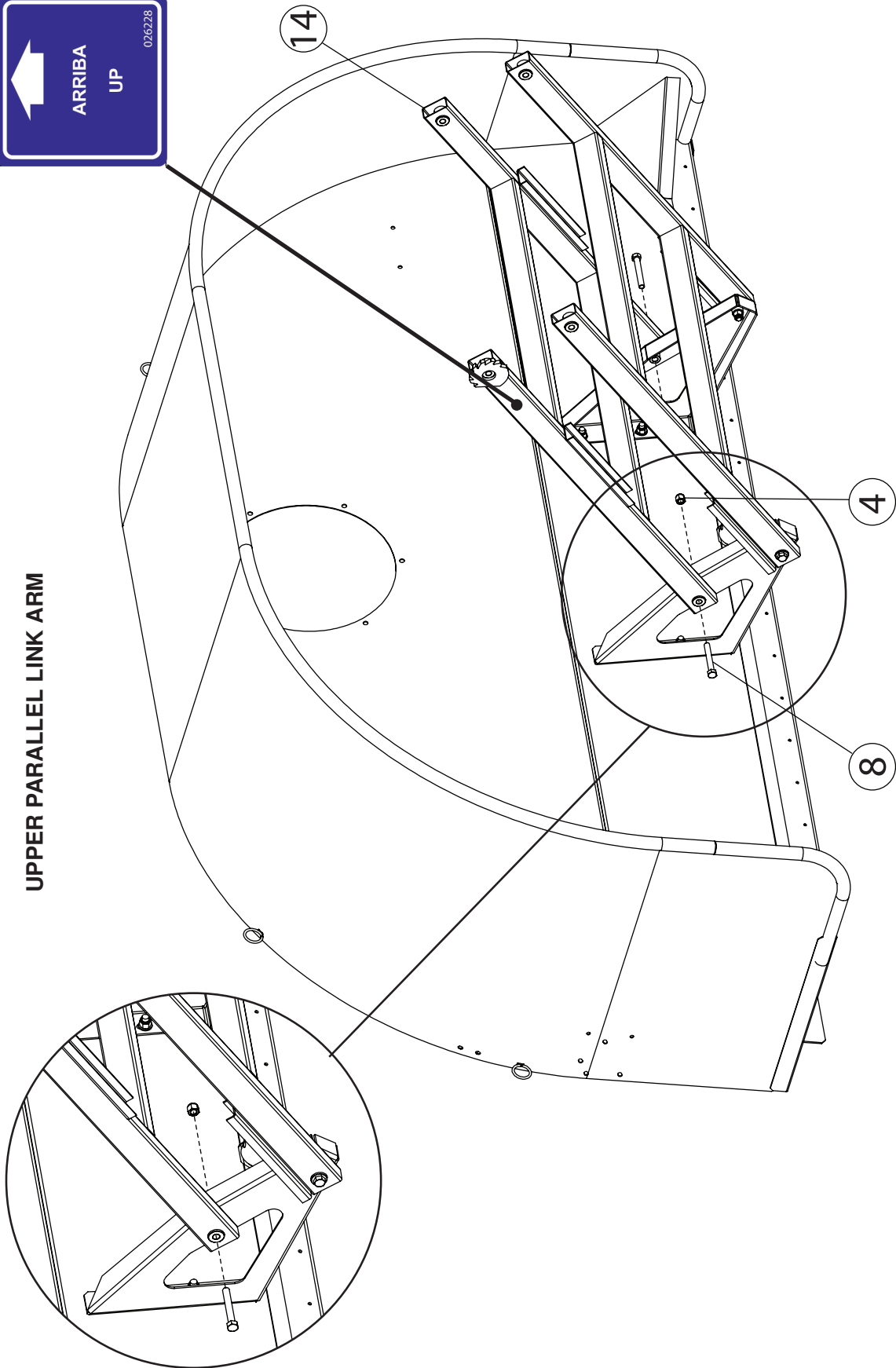


ASSEMBLY STEP # 5



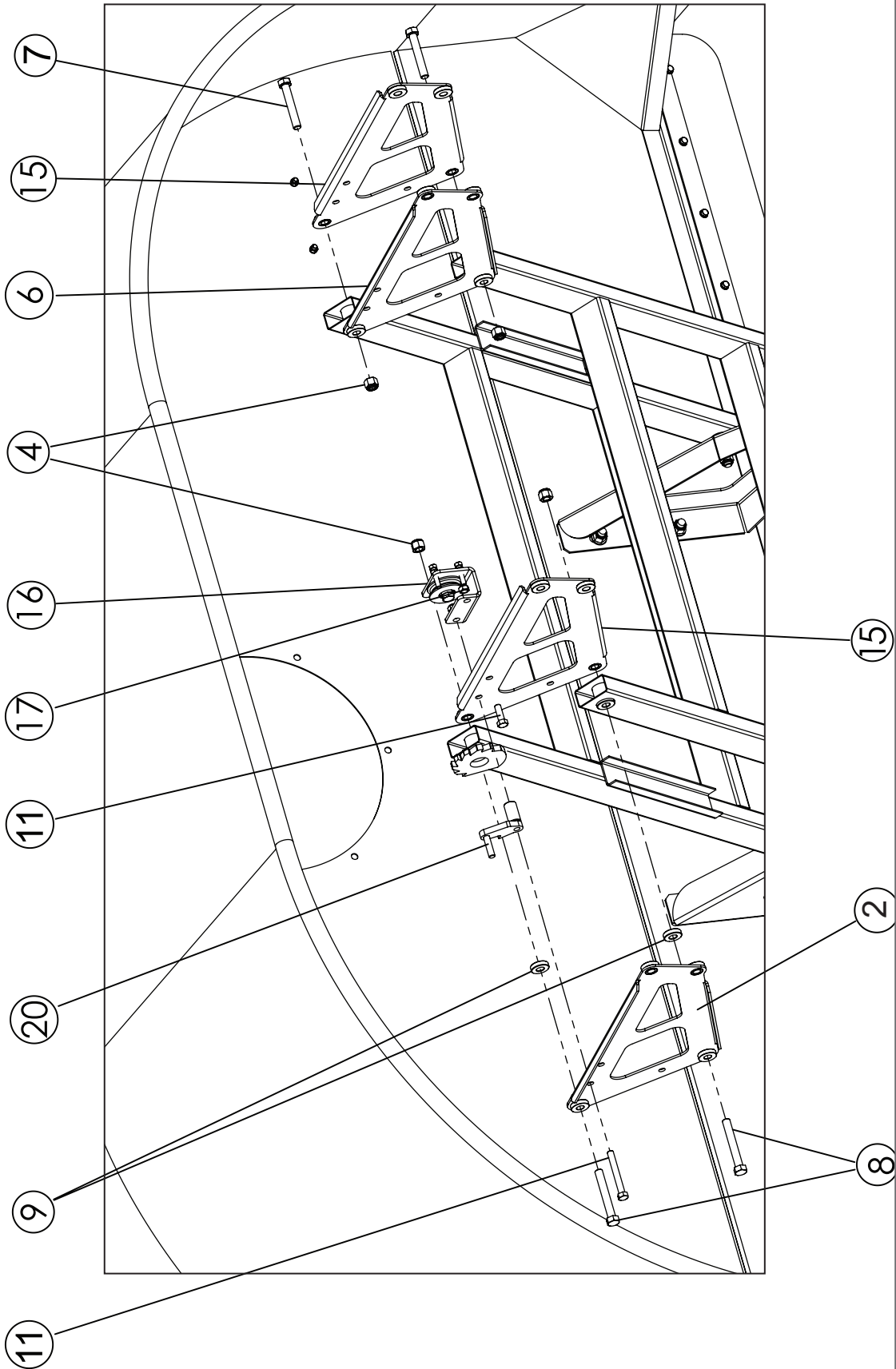


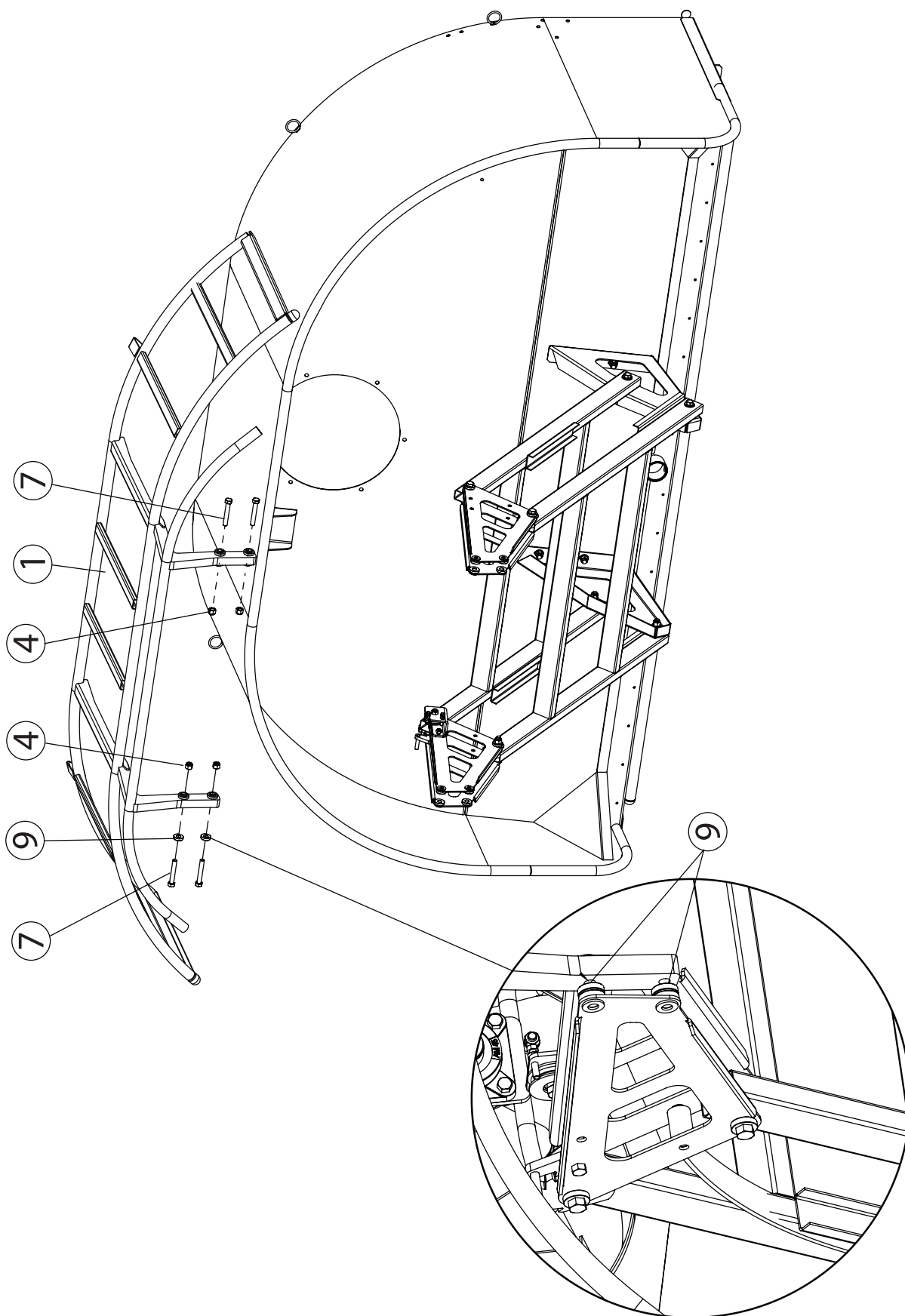
### UPPER PARALLEL LINK ARM



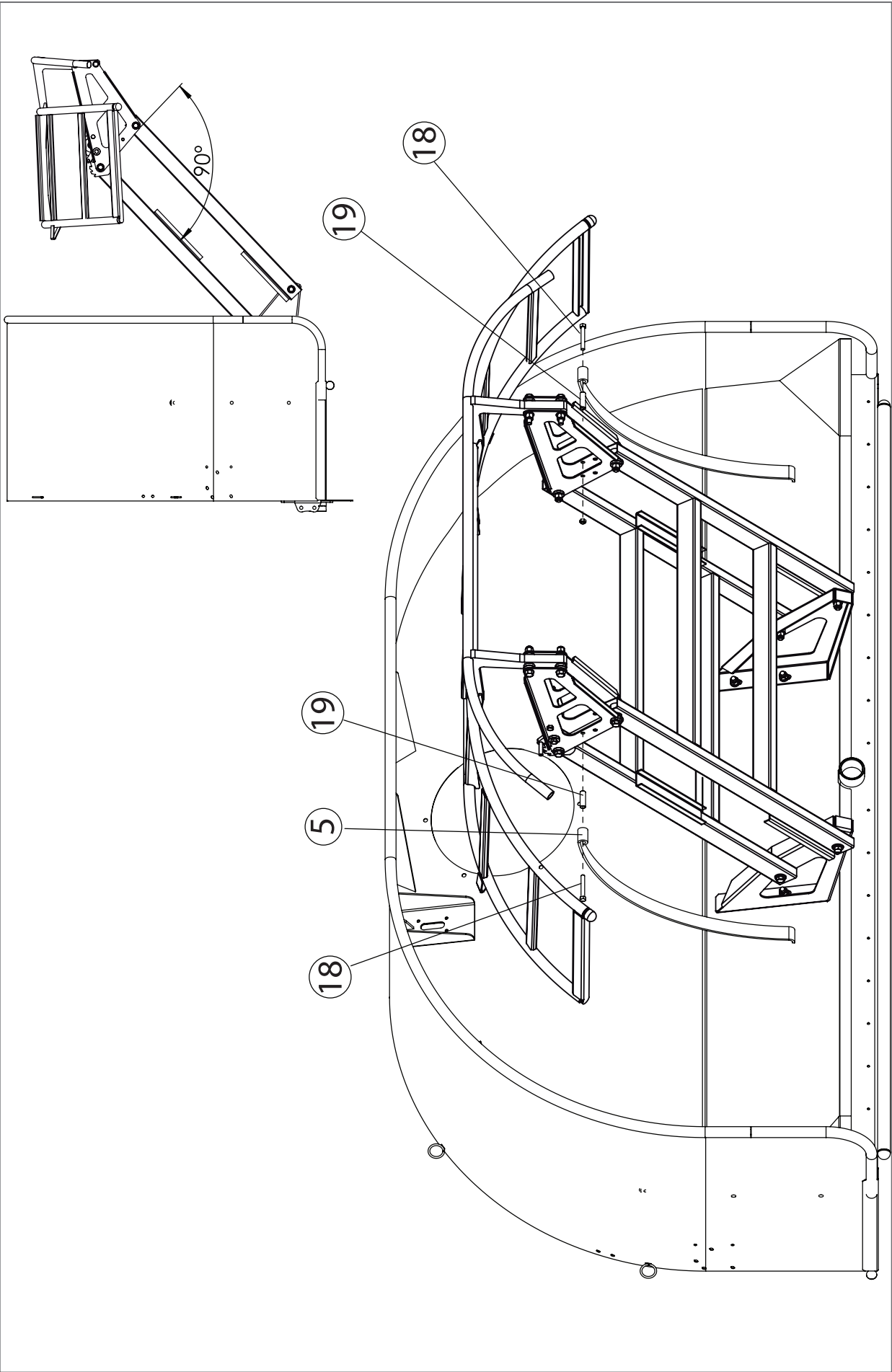
**ASSEMBLY STEP # 5**

**IMPORTANT:** ADJUST ALL THE BOLTS OF THE PARALLEL LINK SYSTEM ALL THE WAY AND TURN THEM 360° COUNTER-CLOCKWISE TO ALLOW FREE MOVEMENT OF THE SYSTEM. CHECK FREE MOVEMENT OF THE LOCK-LATCH .





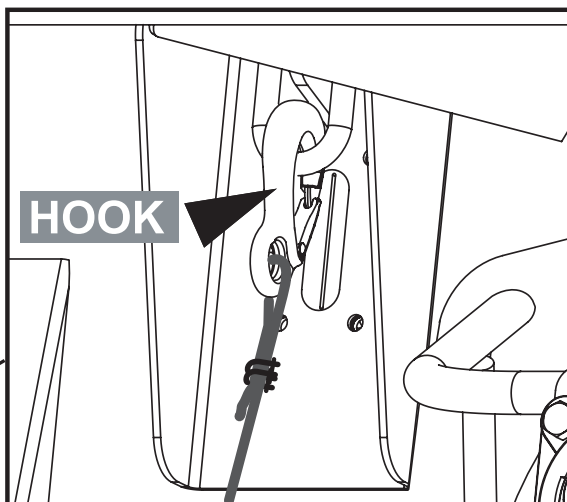
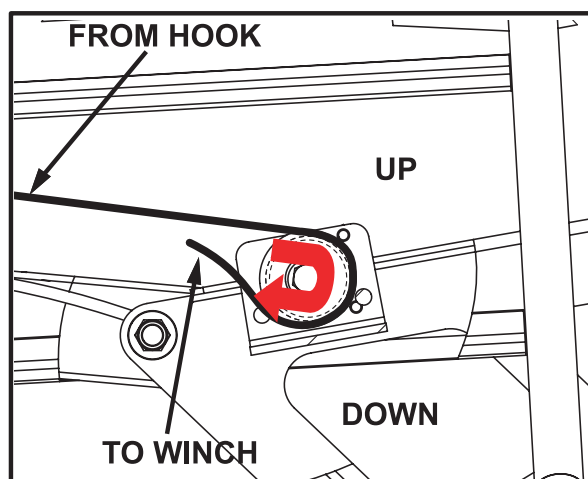
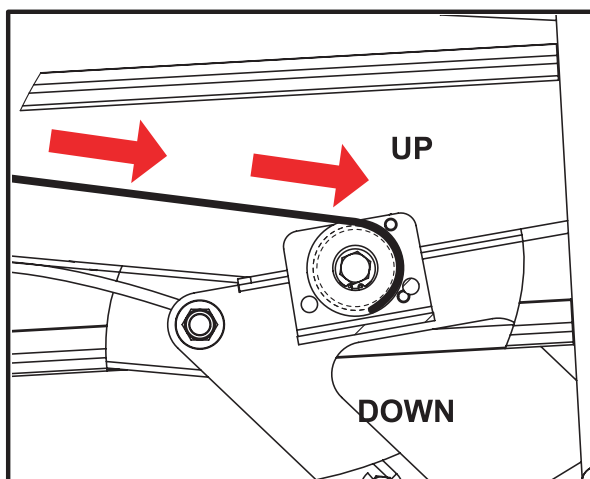
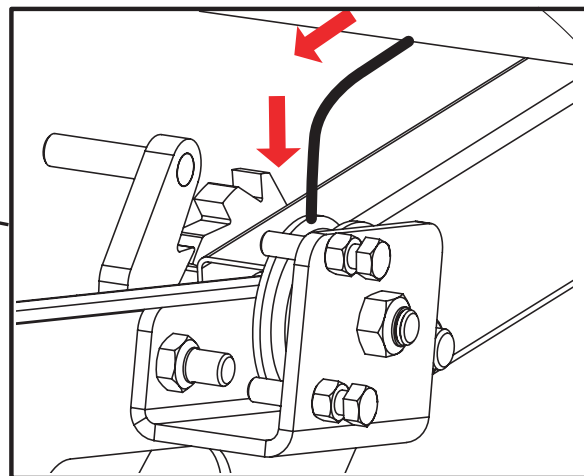
ASSEMBLY STEP # 5



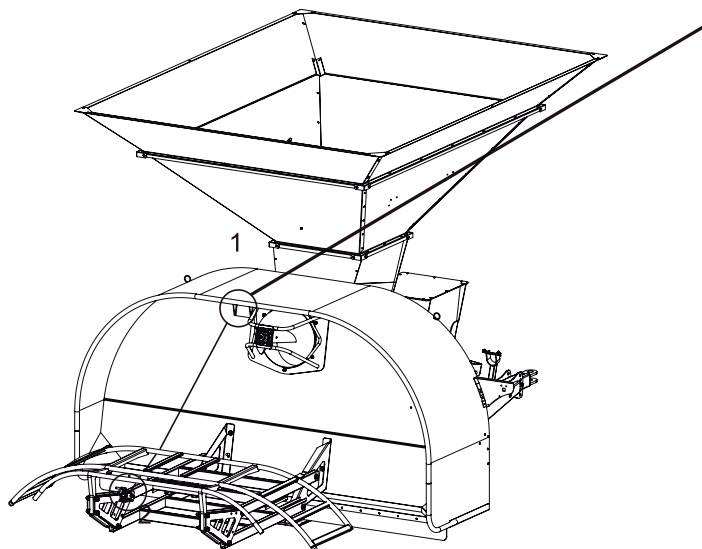


**6 - ELECTRICAL WINCH INSTALLATION**

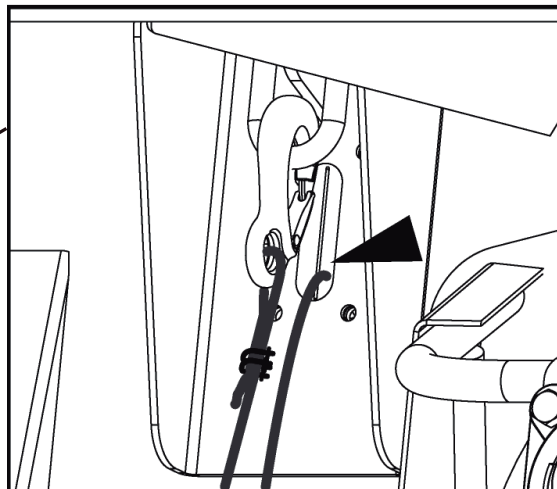
- UNWIND AND REMOVE THE CABLE ROPE FROM THE ELECTRIC WINCH.
- CUT THE CABLE ROPE TO A LENGTH OF 6.30 MTS.
- ATTACH THE CABLE ROPE HOOK TO THE BOW SHACKLE.

**STEP 1****STEP 2**

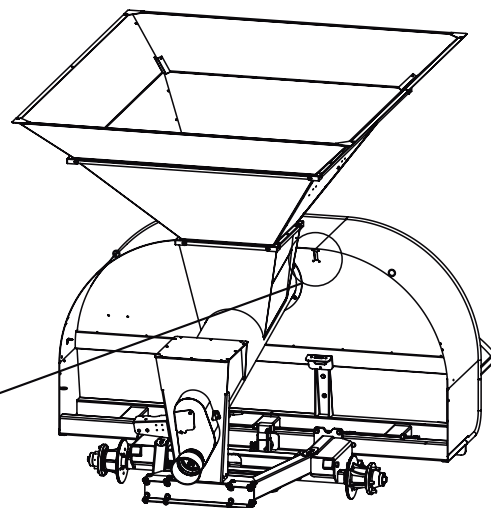
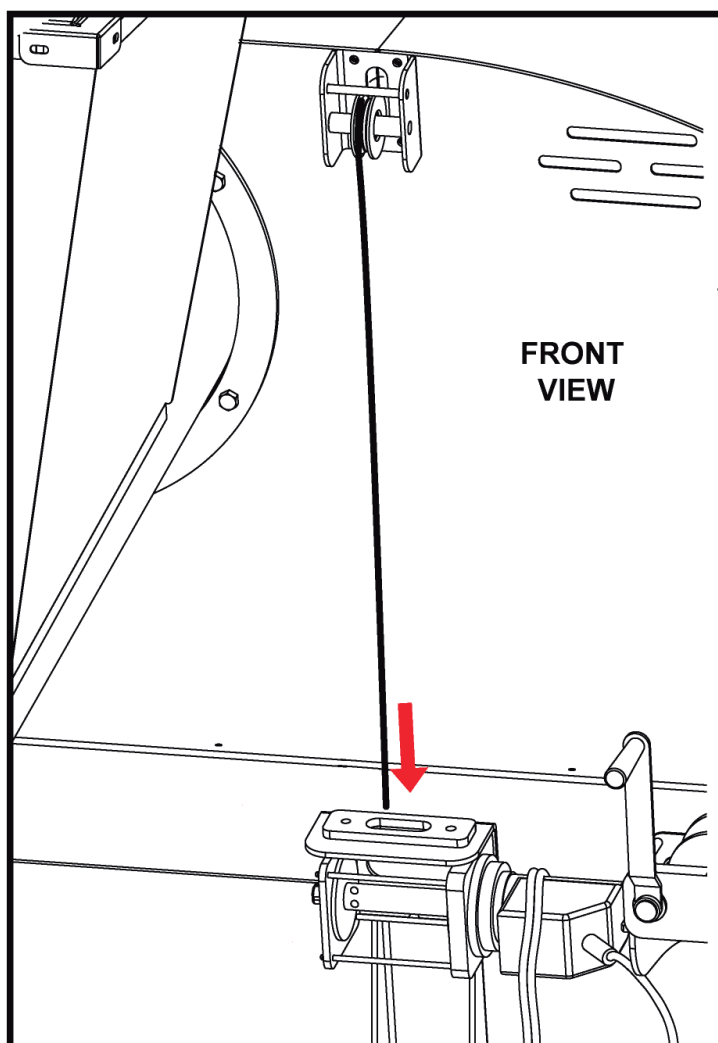
ONCE THE CABLE ROPE HAS BEEN PASSED THROUGH THE HOLE AS SHOWN IN STEP # 3, GUIDE THE WIRE ROPE THROUGH THE PULLEY AS SHOWN IN STEP #4.



### STEP 3



### STEP 4



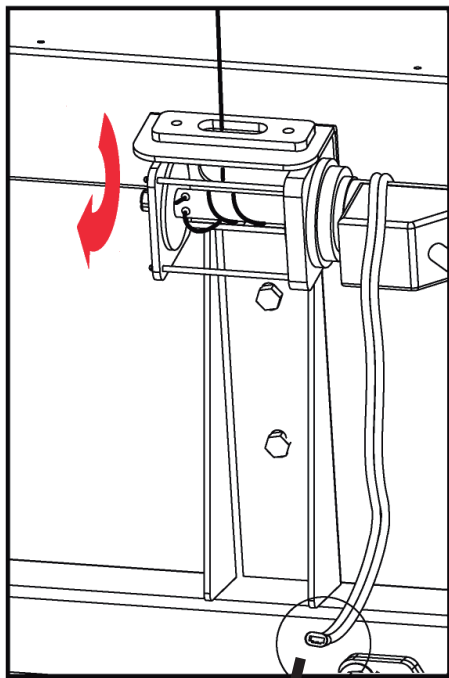
#### ELECTRIC WINCH SUPPORT BOLTS:

**98.037.095025:** HEX-SOCKET HEAD CAP SCREW, 3/8" X 1" BSW - QTY:3

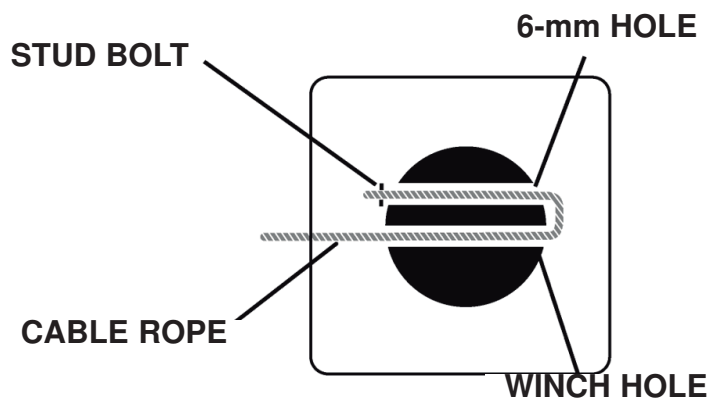
**98.304.151095:** LOCK NUT G5 3/8" BSW - QTY: 3

**98.309.101095:** FLAT WASHER, 3/8" YELLOW ZINC PLATED QTY: 3

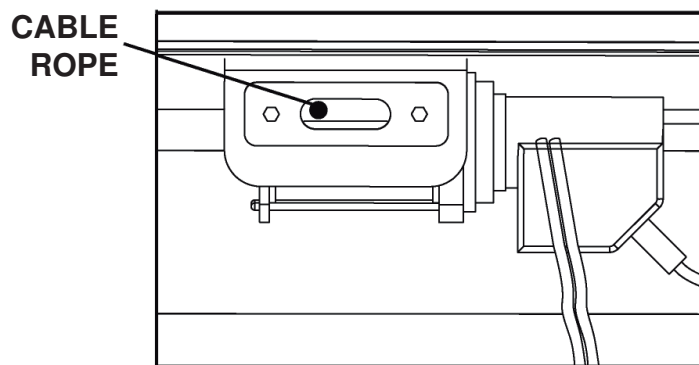
SET OF COMMERCIAL PARTS - BAG N°7 - 29.39.50227

**STEP 5**

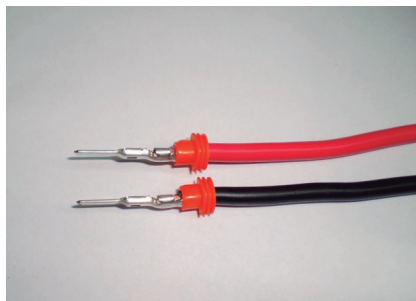
MAKE AN ADDITIONAL HOLE ON THE WINCH CABLE ROPE DRUM. GET THE CABLE ROPE THROUGH THE HOLES AND FIX IT WITH A STUD BOLT.



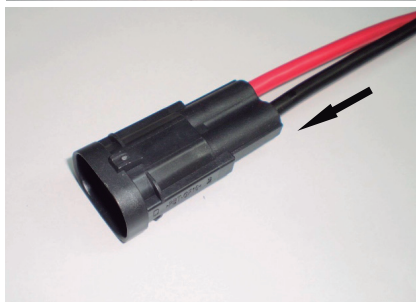
ROTATE THE CABLE ROPE DRUM COUNTER CLOCKWISE SO THE CABLE ROPE DOES NOT RUB AGAINST THE HAWSE FAIRLEAD.



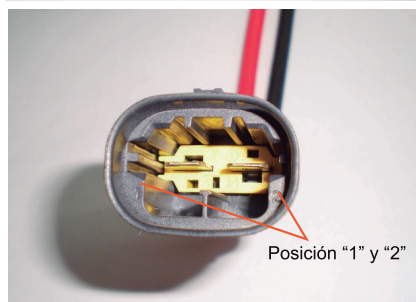
2



3



4

**ELECTRICAL WINCH CONNECTION INSTRUCTIONS**

1 - CUT 1.25 M OF WINCH ELECTRICAL WIRE .

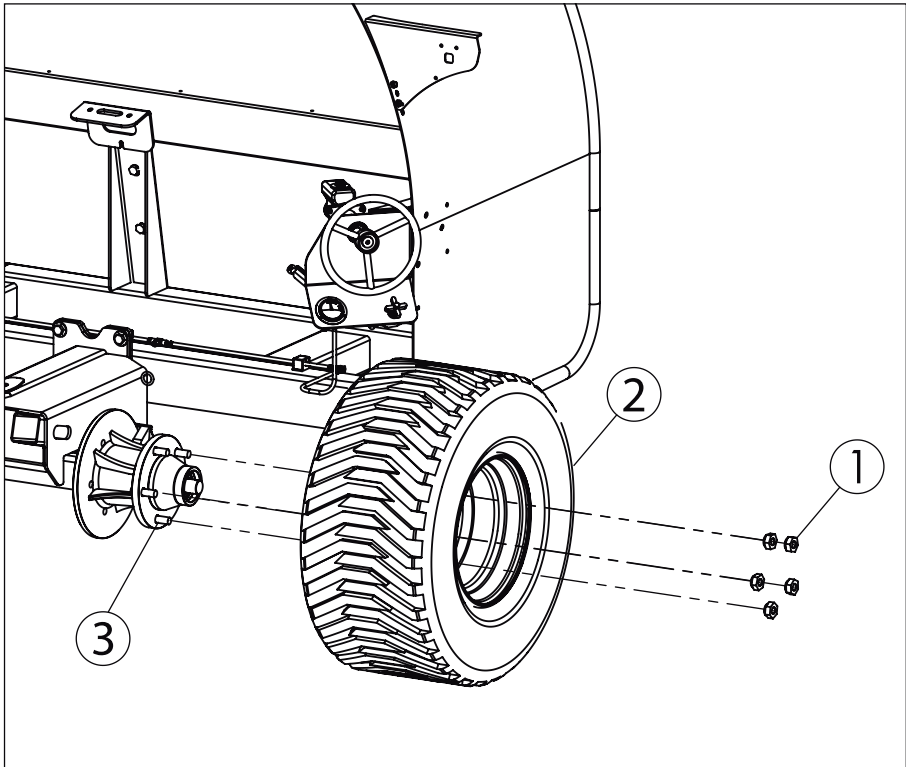
2 - PUT THE SEAL AND CONNECT THE TERMINAL TO THE CABLE.

3 - INTRODUCE EACH CABLE INTO THE CONNECTOR CORRECT POSITION UNTIL MAKING A CLICK "SOUND". THE RED CABLE GOES IN POSITION "1" WHILE THE BLACK CABLE GOES IN POSITION "2"

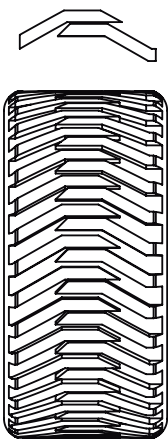
4 - ONCE THE CONNECTOR IS ASSEMBLED, PRESS THE YELLOW PLASTIC SAFETY LOCK INTO THE CONNECTOR UNTIL MAKING A "CLICK" SOUND.

ASSEMBLY STEP # 7

#	PART#	DESCRIPTION	QTY
1	98.306.350190	WHEEL NUT, WIDE FLANGE 3/4" NF	10
2	29.39.28140	LEFT TIRE/RIM ASSEMBLY (98.395.028142 RIM 13.00 CD FOR TIRE 400/60 - 15.5 - 98.662.028141 BKT TIRE, 400/60 - 15.5, 14-PLY)	1
	29.39.28143	RIGHT TIRE/RIM ASSEMBLY (98.395.028142 RIM 13.00 CD FOR TIRE 400/60 - 15.5 - 98.662.028141 BKT TIRE, 400/60 - 15.5, 14-PLY)	1
3	98.232.190062	HUB SCREW, 3/4" X 2" 1/2 NF	10



WHEEL POSITION



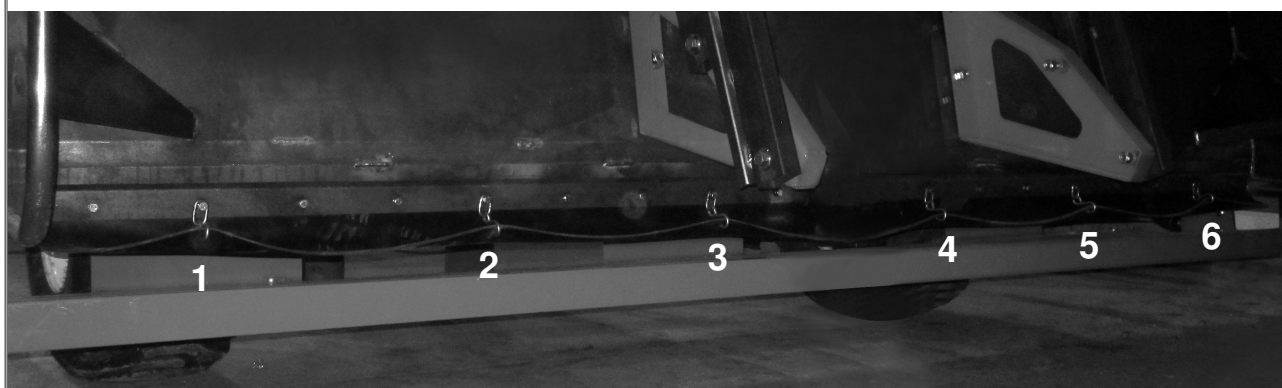
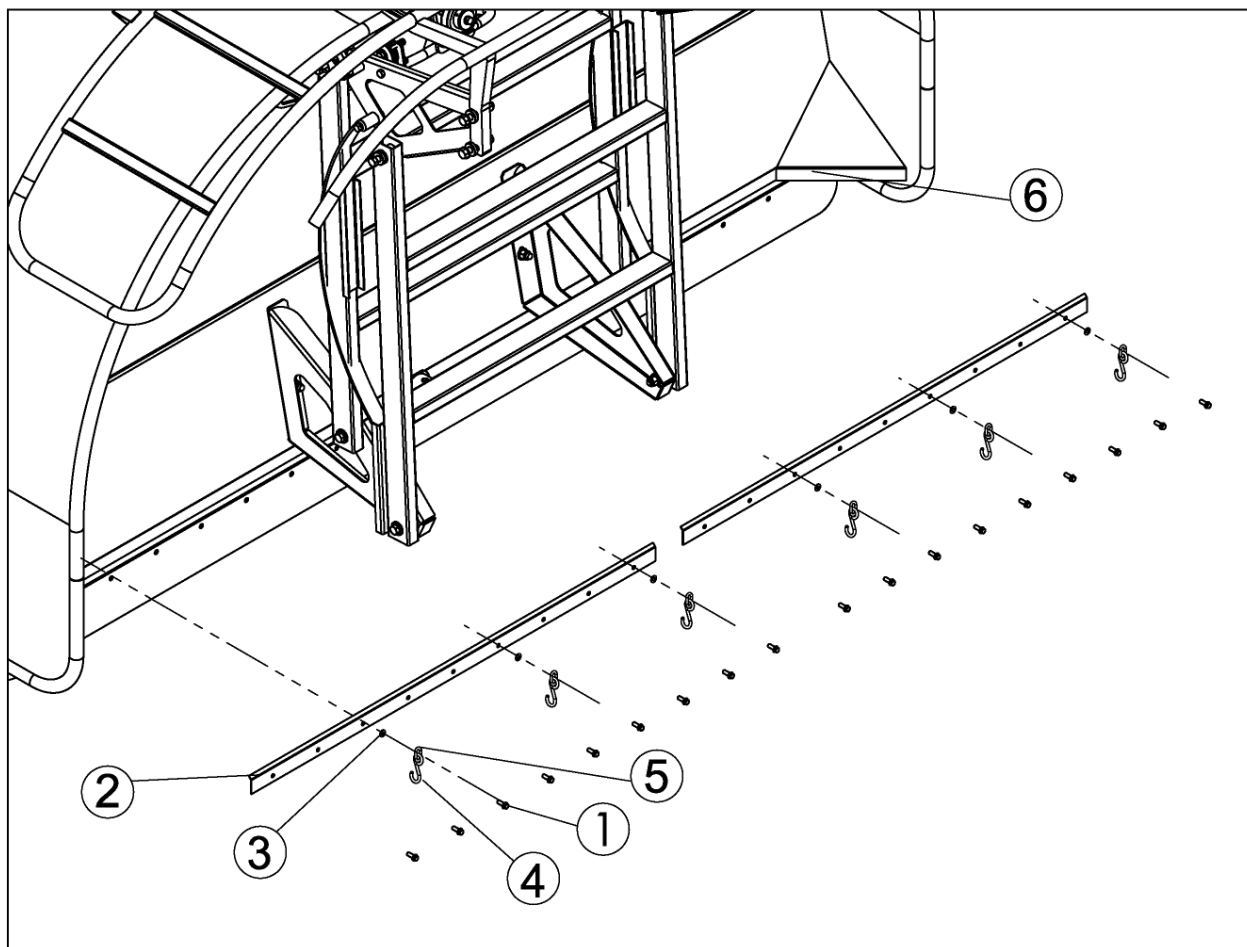
CORRECT



INCORRECT

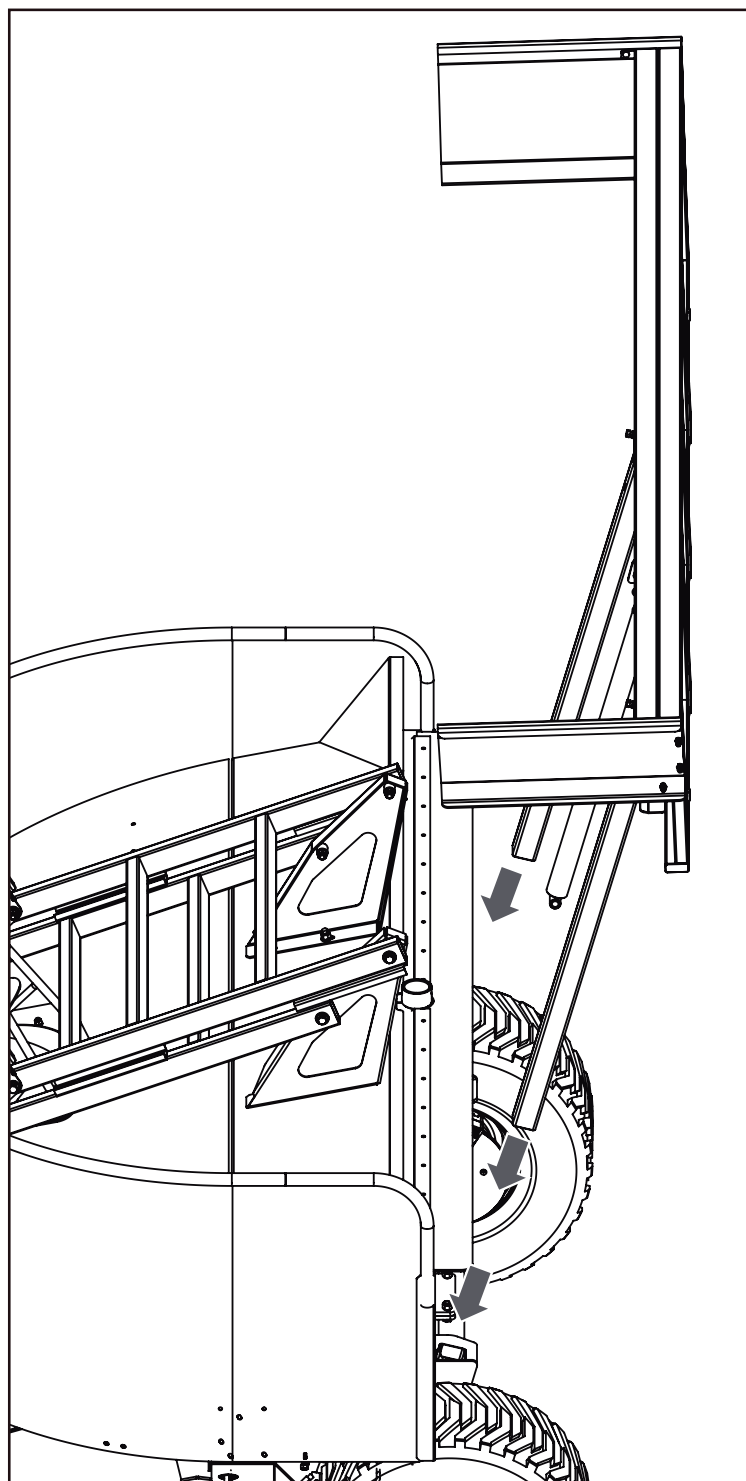
**ASSEMBLY STEP # 8**

#	PART#	DESCRIPTION	QTY.
1	98.002.095025	HEX HEAD SCREW G5 3/8"X1" BSW	18
2	29.42.30215	RUBBER FLAP SUPPORT	2
3	98.310.100095	GROWER WASHER 3/8"	18
4	98.368.025512	ELASTIC ROPE HOOK	9
5	99.389.202060	ZINC PLATED CHAIN, N° 60	0.75mts
6	29.46.30216	BOTTOM RUBBER FLAP	1



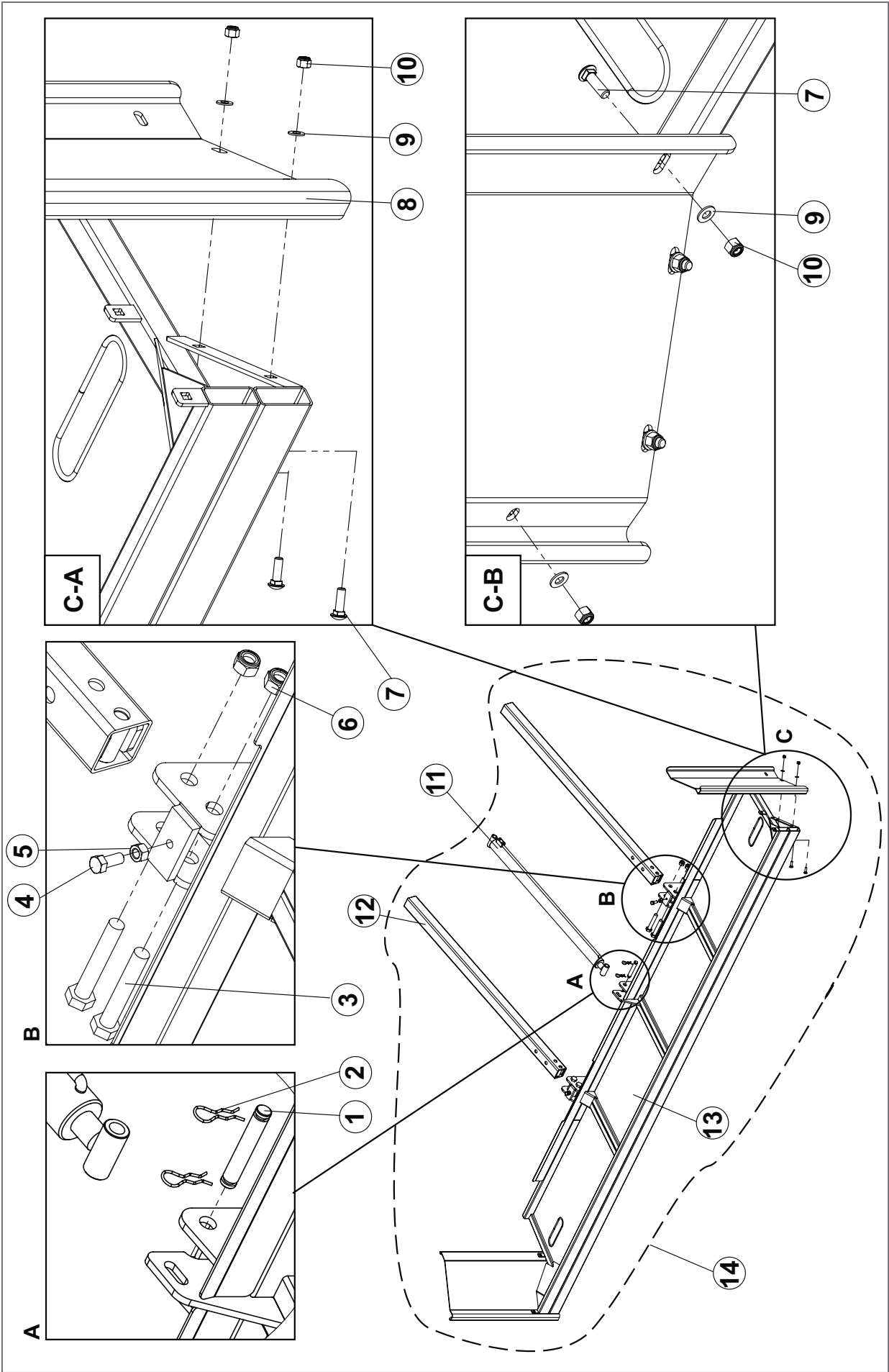
**ASSEMBLY STEP # 9**

#	PART#	DESCRIPTION	QTY.
1	29.43.30875	CYLINDER PIN	1
2	98.380.530060	DOUBLE R CLIP, Ø3 X 60	2
3	98.002.190114	TORN.C/EXAG.G5 3/4"X4 1/2" RW	2
4	98.002.127032	TORN.C/EXAG.G5 1/2x11/4" RW	4
5	98.301.150127	TUERCA HEXAG. G5 1/2"	2
6	98.304.350190	TUERCA AUTOF.G5 3/4" NF	4
7	98.198.095032	ROUND-HEAD SQUARE HEAD BOLT, G5 3/8" X 1"1/4 BSW	8
8	29.42.30772	RIGHT SIDE TRAY RETAINER	1
	29.42.30771	LEFT SIDE TRAY RETAINER	1
9	98.309.100095	ARANDELA PLANA 3/8"	8
10	98.304.110095	TUERCA AUTOBLOC. 3/8" RW	8
11	98.378.030974	CYLINDER 2" / STROKE 925 MM	1
12	29.39.30780	SLIDING INNER TUBE ASSEMBLY	2
13	29.39.30751	WELDED TRAY ASSEMBLY	1
14	29.29.30750	HYDRAULIC TRAY ASSEMBLY	1



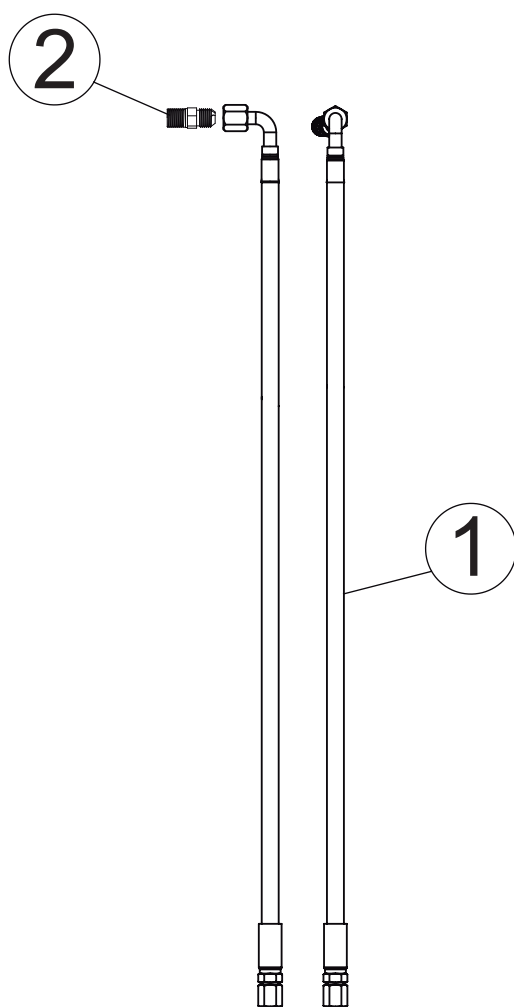


ASSEMBLY STEP # 9

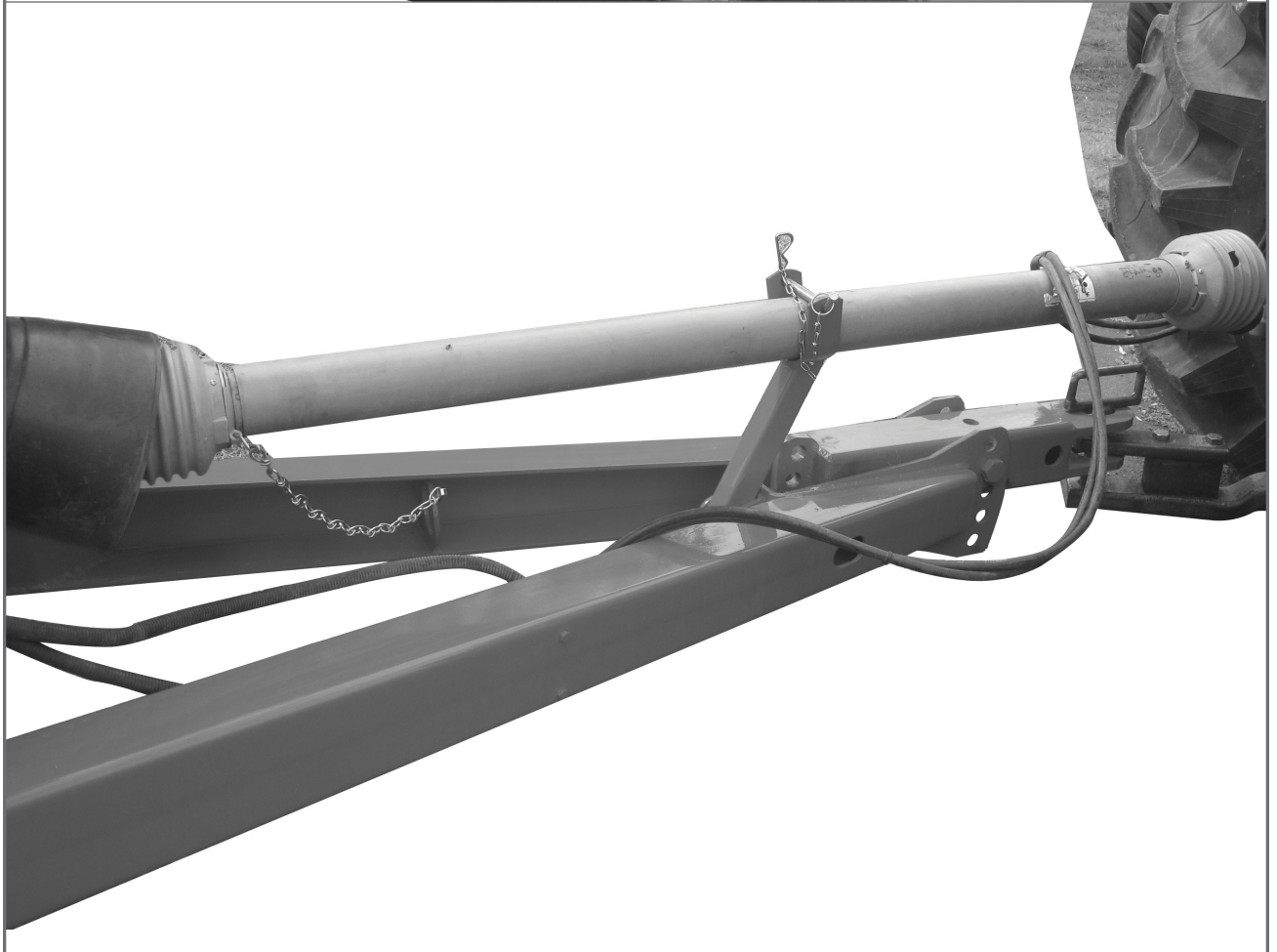
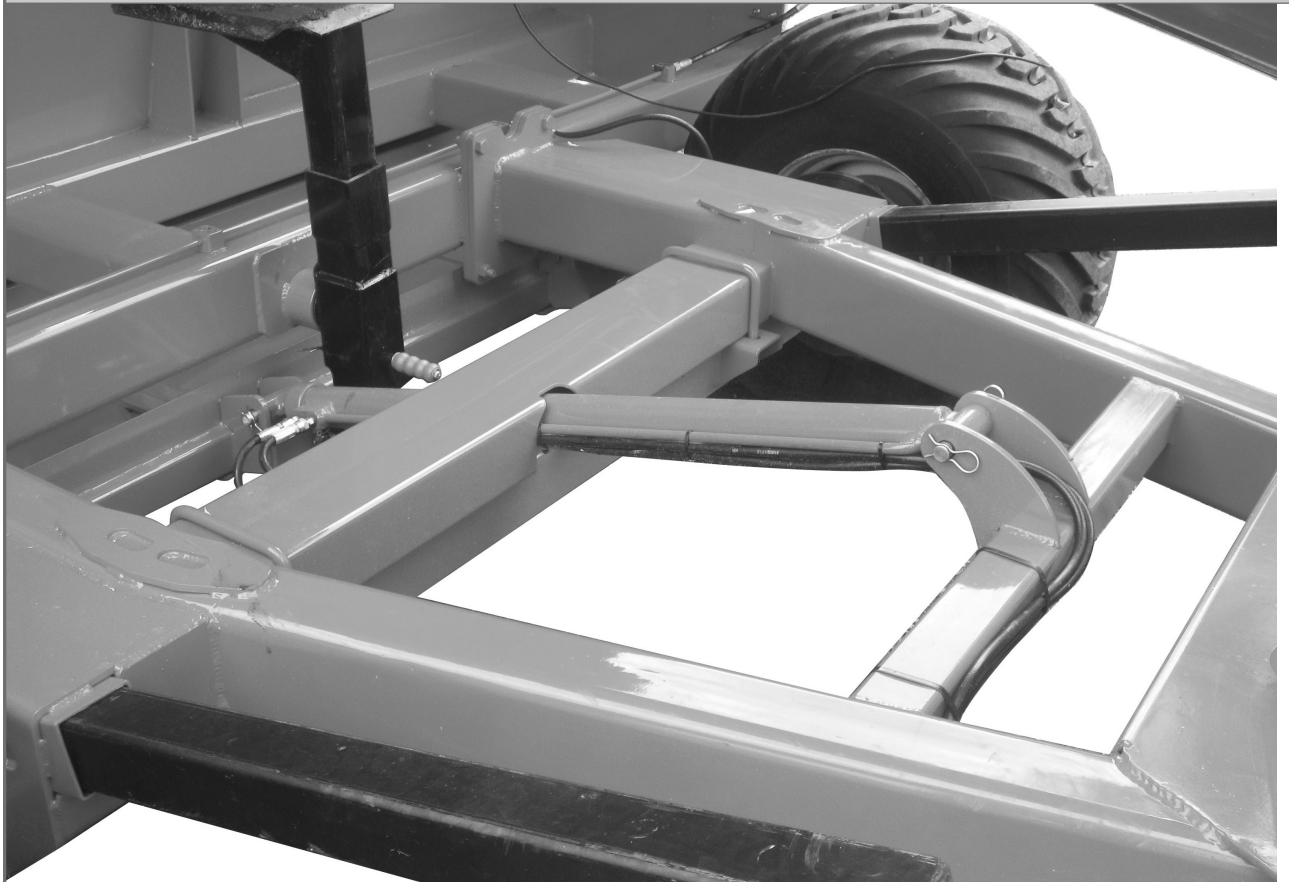


**TRAY HYDRAULIC CIRCUIT- WITHOUT TELEVEYOR - 29.39.30946**

#	PART#	DESCRIPTION	QTY.
1	29.56.30944	TRAY - TRACTOR HOSE	2
2	98.378.060136	ADAPTER, M/M 1/4" NPT X 9/16 JIC-REDUCED: Ø1.25MM	2

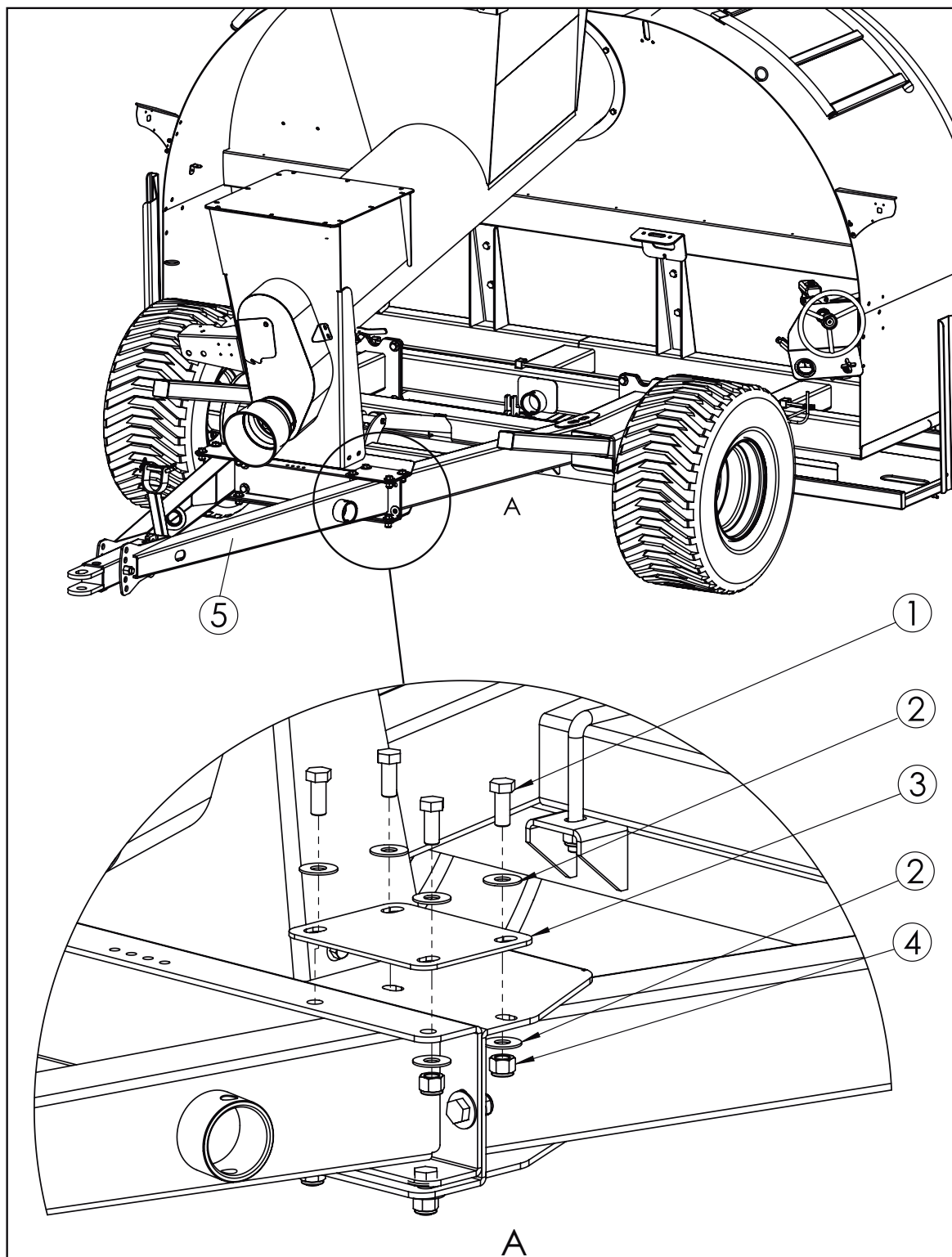


**TRAY HYDRAULIC CIRCUIT**



**ASSEMBLY STEP # 10**

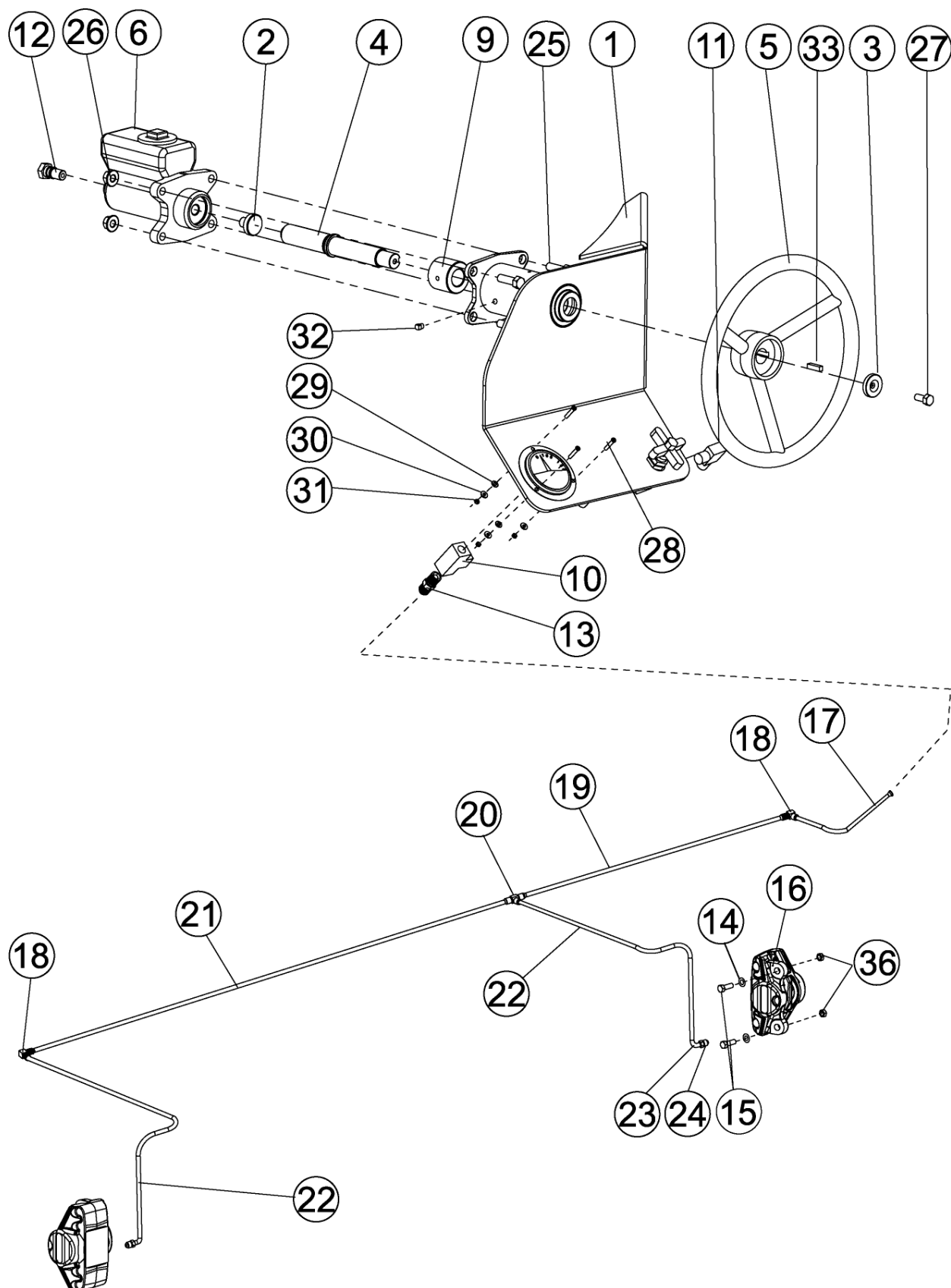
#	PART#	DESCRIPTION	QTY.
1	98.002.158044	HEX HEAD SCREW G5 5/8" X 3/4" BSW	16
2	98.309.101158	CADMIUM PLATED FLAT WASHER, 5/8".	32
3	29.42.28184	REINFORCEMENT PLATE BOLTED TO TOWBAR	2
4	98.304.110158	LOCK NUT 5/8"-15 BSW	16
5	29.29.28180	GTX ASSEMBLED TOWBAR	2



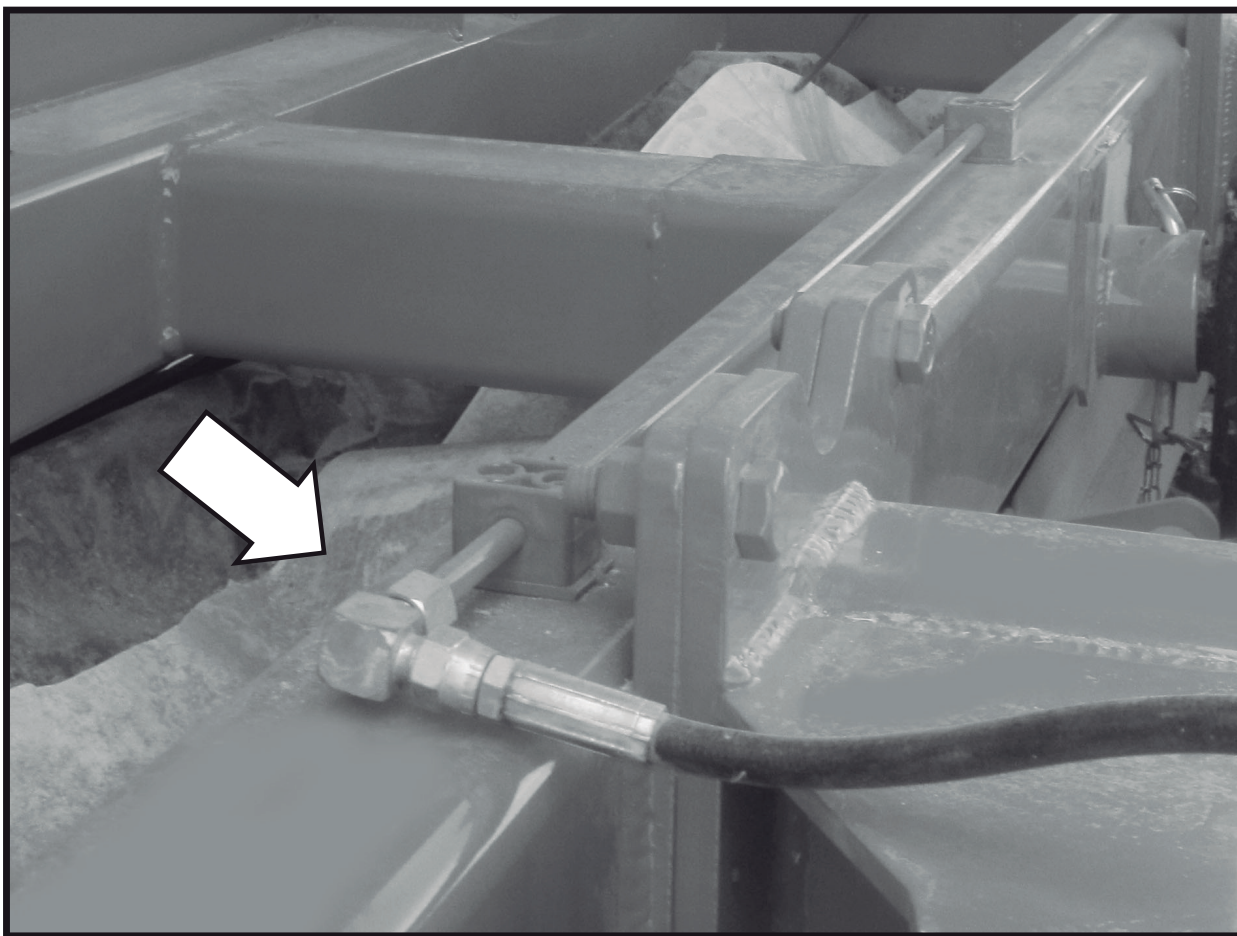
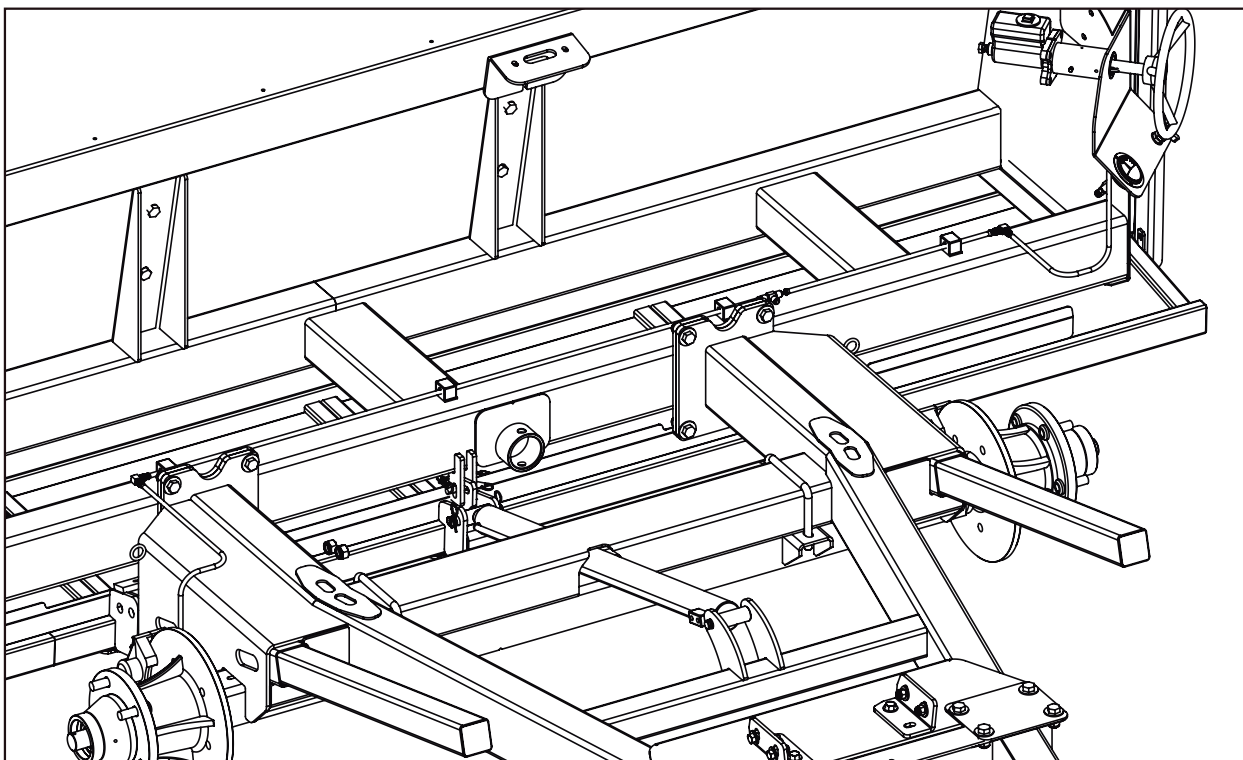
**ASSEMBLY STEP # 11**

#	PART#	DESCRIPTION	QTY.
1	27.39.28829	WELDED PANEL	1
2	29.43.27806	BRAKE PUMP SUPPLEMENT	1
3	29.42.27807	BRAKE HANDWHEEL COVER	1
4	29.43.27808	BRAKE PUMP SHAFT	1
5	98.408.027809	BRAKE PUMP HANDWHEEL	1
6	98.395.027808	DODGE BRAKE PUMP WITH F700 PISTON	1
7	98.378.027811	PRESSURE GAUGE, 1/4" NPT	1
8	98.378.027815	BRAKE PRESSURE CONTROL VALVE	1
9	29.43.27804	BRAKE PUMP ACTIVATION NUT	1
10	98.378.071985	FEMALE TEE FITTING, 1/4" NPT	1
11	98.378.054501	37° ELBOW JIC - RING	2
12	29.43.27812	PERFORATED SCREW	1
13	98.378.060135	NIPPLE ADAPTER, 1/4" NPT – 9/16" NF	1
14	98.311.112127	BEVELED FLAT WASHER, 1/2"	4
15	98.002.127044	HEX HEAD SCREW, G5 1/2 x 1 3/4" BSW	4
16	98.395.025735	BRAKE CLAMP	2
17	29.43.28820	PIPE HOSE – BRAKE PUMP	1
18	98.378.020108	90° ELBOW, M 9/16" -18 UNF JIC/M 9/16"-18	2
19	29.43.28818	HYDRAULIC PIPE CONNECTING TO BRAKE PUMP	2
20	98.378.071977	TEE FITTING M 9/16" JIC/ M 9/16" JIC/M 9/16"	1
21	29.43.28817	HYDRAULIC PIPE CONNECTING BRAKE PUMP TO CALIPER	1
22	29.43.28819	HOSE CONNECTING BRAKE PIPE TO CALIPER	2
23	98.459.010015	ALUMINUM WASHER, Ø 10 mm, THIN FLANGE	2
24	98.378.013967	ADAPTER, M-M 9/16"JIC – 3/8" NF	2
25	98.002.095032	HEX HEAD SCREW, G5 3/8" x 1 1/4" BSW	4
26	98.304.151095	HEX LOCK-NUT, 3/8" BSW	4
27	98.002.079019	HEX HEAD SCREW, G5 5/16" X 3/4" BSW	1
28	98.173.039019	ROUNDED HEAD SCREW 5/32" X 3/4"	3
29	98.309.100039	FLAT WASHER, 5/32"	3
30	98.310.100039	GROWER WASHER, 5/32"	3
31	98.301.150039	HEX HEAD NUT, G5 5/32" BSW	3
32	98.061.063022	STUD BOLT, G8 1/4" X 7/8" BSW	1
33	29.43.27810	WHEEL KEY	1
34	98.378.027811	PRESSURE GAUGE, 1/4" NPT	1
35	98.378.027815	BRAKE PRESSURE CONTROL VALVE	1
36	98.304.151127	SELF-LOCKING NUT, G5 1/2" BSW	4

## ASSEMBLY STEP # 11

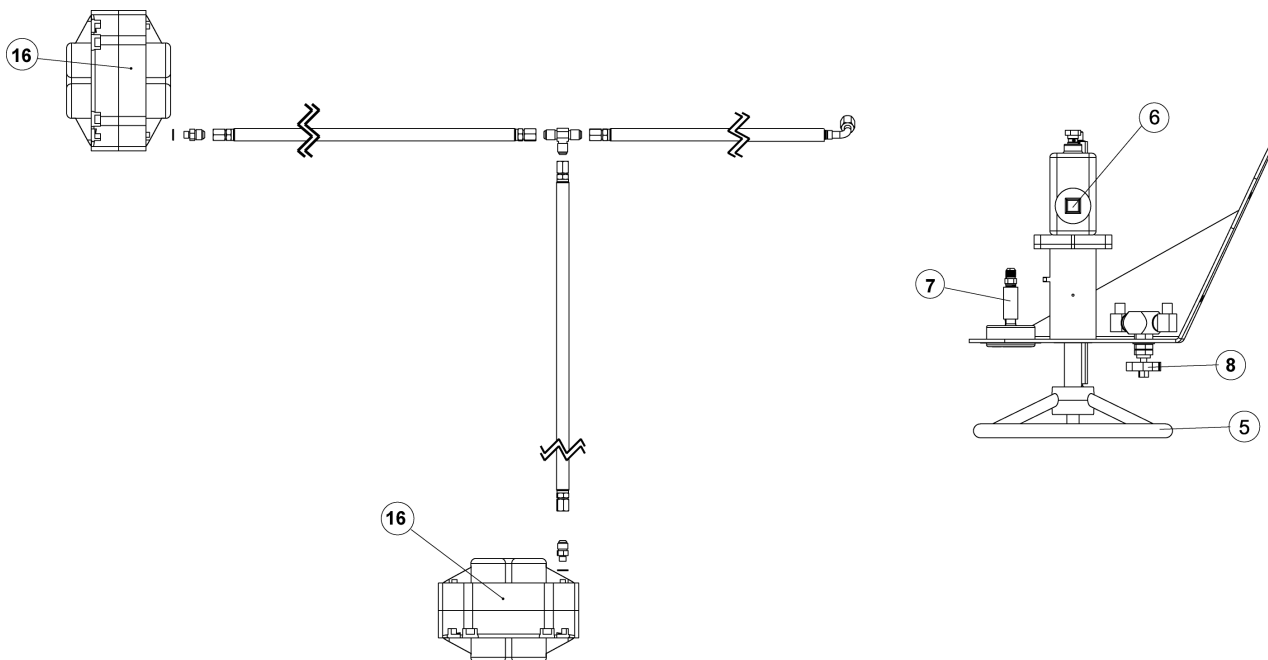




**ASSEMBLY STEP # 11****LOCATION OF HYDRAULIC CIRCUIT COUPLERS**

## BRAKE CIRCUIT BLEEDING

- 1- Connect the hose from the calipers to the fittings located behind the brake panel.  
(4).
- 2- Remove the plug (3) and put the brake fluid provided by the manufacturer into the tank.
- 3- Open the bleed screw of the caliper further from the pump (5)
- 4- Close the switch valve lever (1) and turn the steering wheel (2) all the way counterclockwise (When performing this action, slowly turn the wheel to allow oil to flow through the circuit).
- 5- Open the knob (1) and turn the steering wheel (2) all the way.
- 6- Repeat steps 4 and 5 until there is no sign of air in the fluid flowing through the bleed screw. If after trying this process between 8 and 10 times, no fluid is observed to flow through the bleeder outlet, check that the fittings located behind the brake panel are correctly engaged.
- 7- Close the bleed screw previously opened and follow steps 4 and 5 detailed above with the other caliper (6).





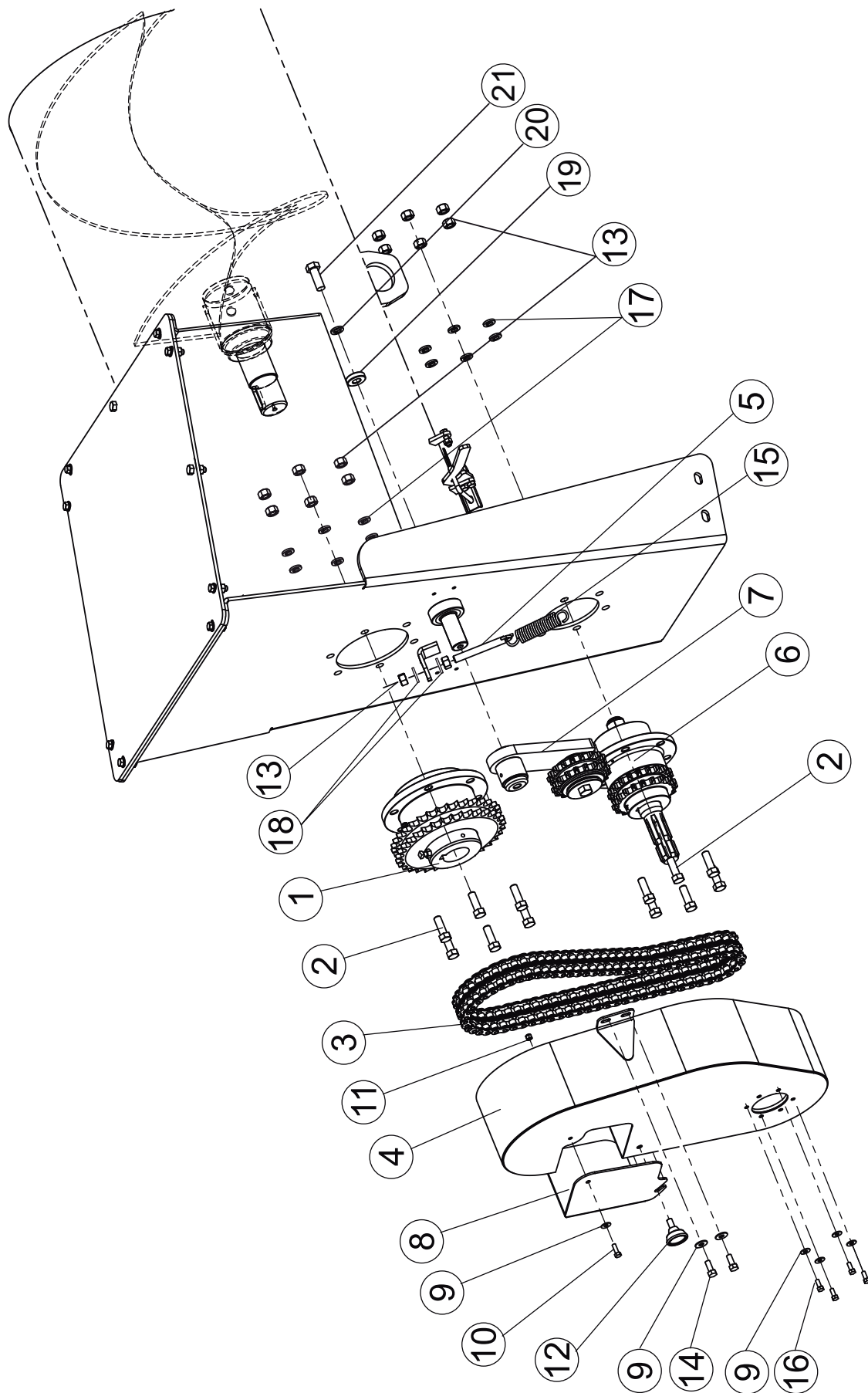
# **SPARE PARTS - APPENDIX**



**ASSEMBLY STEP # 12**

#	PART#	DESCRIPTION	QTY.
1	29.39.30380	AUGER BEARING HOUSING	1
2	98.002.127038	HEX HEAD SCREW, G5 1/2" X 1 1/2" BSW	12
3	29.39.30360	ROLLER CHAIN ASA 80-2 1"	2
4	29.39.30445	10' BAGGER CHAIN COVER	1
5	25.43.25726	TENSION REGULATOR	1
6	29.39.30400	INLET SHAFT SUPPORT BOX	1
7	25.39.30730	ROLLER CHAIN TENSION SYSTEM 1/2"	1
8	29.42.28434	CHAIN COVER CAP	1
9	98.309.100063	FLAT WASHER 1/4"	5
10	98.002.063019	HEX HEAD SCREW G5 1/4" X 3/4" BSW	1
11	98.304.151063	LOCK NUT G5 1/4" BSW	1
12	98.408.014264	WHEEL KNOB, LTD 875 1833	1
13	98.301.150127	HEX NUT, G5 1/2" BSW	12
14	98.002.079025	HEX HEAD SCREW G5 5/16" X 1" BSW	7
15	98.342.025725	SPRING	1
16	98.002.063016	HEX HEAD SCREW G5 1/4" x 5/8" BSW	4
17	98.310.100127	GROWER WASHER 1/2"	12
18	98.309.101127	ZINC PLATED FLAT WASHER, 1/2"	2
19	29.43.27577	BUSHING	1
20	98.310.100158	GROWER WASHER 5/8"	1
21	98.002.158044	HEX HEAD SCREW G5 5/8" x 1 3/4" BSP	1

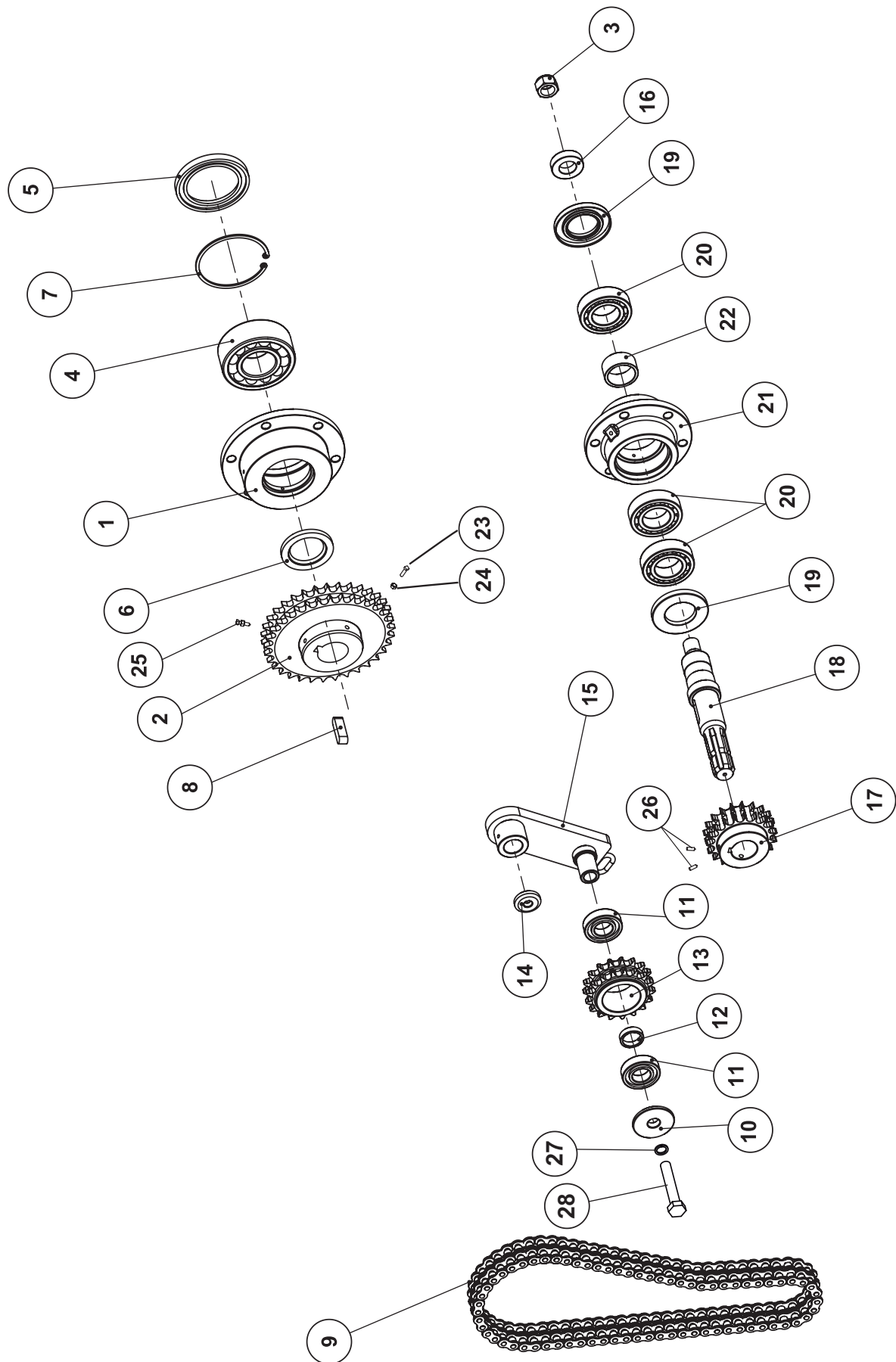
## ASSEMBLY STEP # 12



**ASSEMBLY # 13**

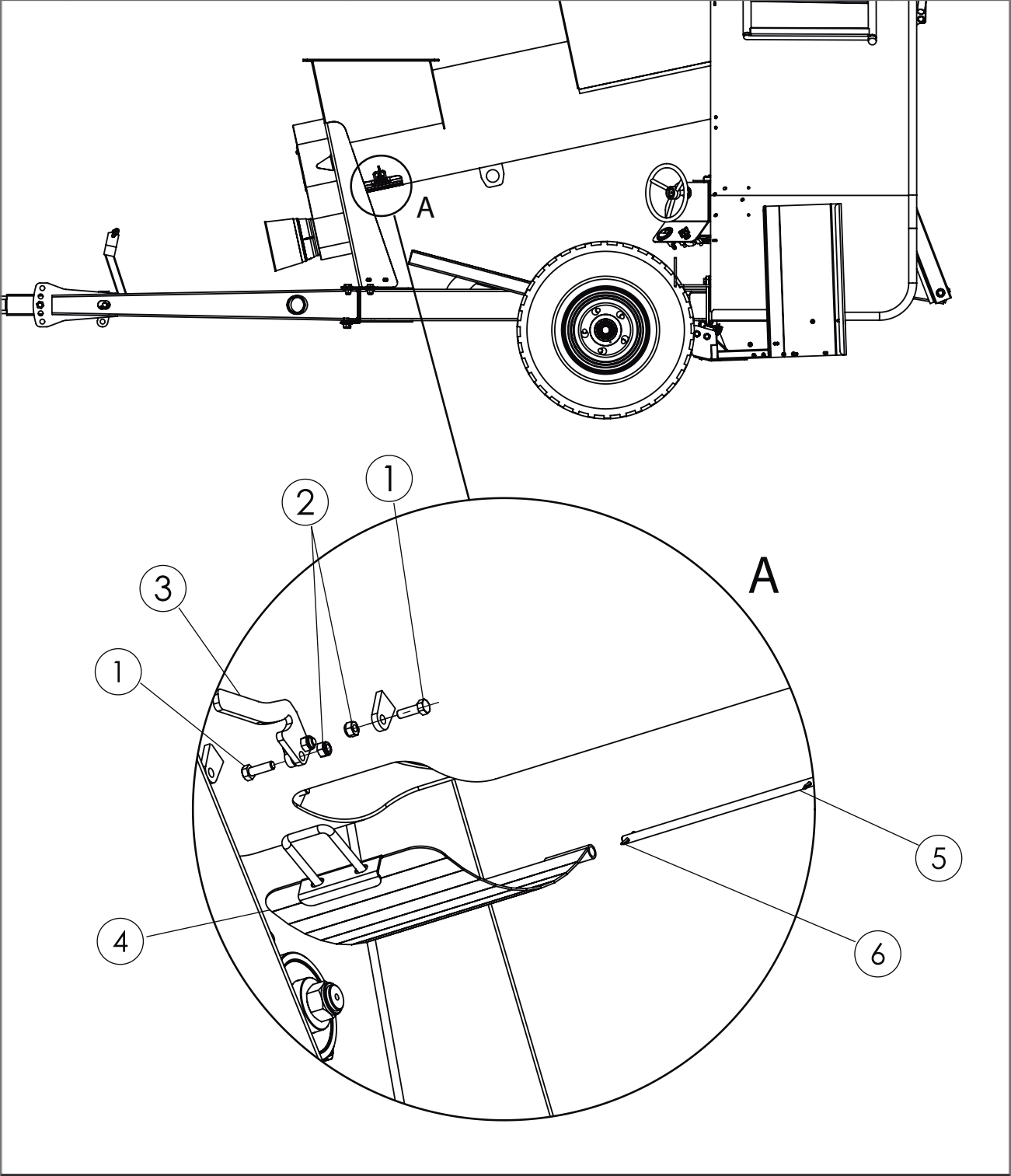
#	PART #	DESCRIPTION	QTY
1	29.43.27381	BAGGER FRONT AUGER SUPPORT	1
2	29.43.30423	AUGER SPROCKET, Z 24 ASA 80 DOUBLE	1
3	98.304.350254	LOCK NUT, G5 1"-14 NF	1
4	98.713.214655	2311 BEARING	1
5	98.611.178084	SAV 10279 SEAL	1
6	98.611.176455	SAV 10322 SEAL	1
7	98.322.001200	SEEGER RING FOR Ø120 mm HOLE	1
8	29.43.30425	AUGER BEARING HOUSING KEY	1
9	29.39.30360	ASA 80-2 PITCH 1" CHAIN	1
10	25.43.30713	CHAIN TURNBUCKLE COVER	1
11	98.705.206530	6206 2RS BEARING	2
12	25.43.21712	BEARING SPACER	1
13	25.53.25710	SPROCKET, 1" Z 13	1
14	25.43.25717	CONNECTING ROD COVER	1
15	25.39.21732	CONNECTING ROD	1
16	29.43.27404	SEAL SUPPORT BUSHING	1
17	25.43.30424	DRIVE SPROCKET	1
18	29.43.30402	SPLINED INLET SHAFT	1
19	98.611.176152	SAV 7280 SEAL	2
20	98.705.207645	6209 BEARING	3
21	29.41.27401	10' BAGGER INLET SHAFT SUPPORT	1
22	29.43.27403	BEARING SPACER BUSHING	1
23	98.061.079032	STUD BOLT, G8 5/16" X 1 1/4" BSW	2
24	98.301.150079	HEX NUT, G5 5/16" BSW	1
25	98.061.079025	STUD BOLT, 5/16" 1" BSW G8	1
26	98.077.079019	ALLEN SET SCREW, 5/16" X 3/4" BSW	2
27	98.310.100190	GROWER WASHER 3/4"	1
28	98.002.190114	HEX HEAD SCREW G5 3/4"X4 1/2" BSW	1

## ASSEMBLY # 13



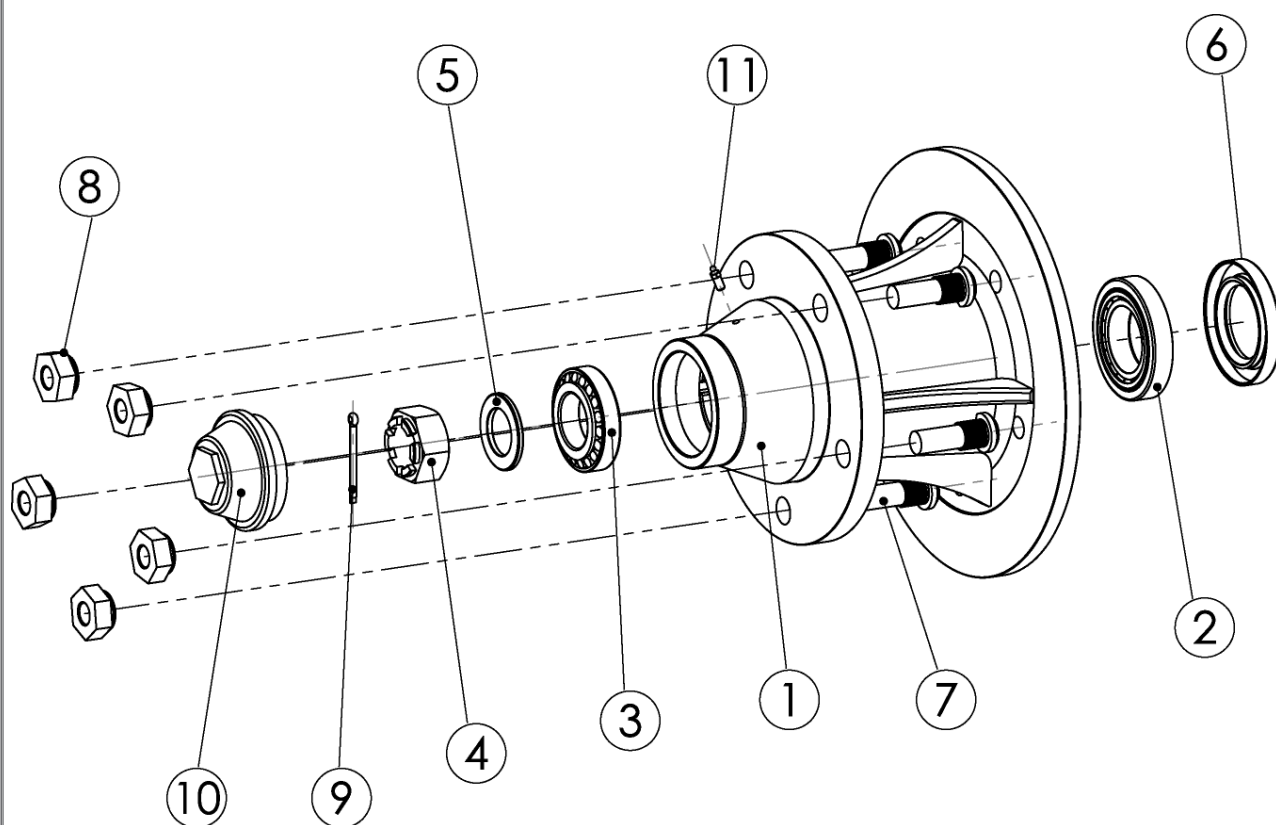
ASSEMBLY STEP # 14

#	PART#	DESCRIPTION	QTY
1	98.002.079025	HEX HEAD SCREW 5/16" X 1" BSW	3
2	98.304.151079	LOCK NUT G5 5/16" BSW	3
3	29.42.25993	BOTTOM COVER HANDLE	1
4	29.39.28420	10-FOOT BAGGER INSPECTION COVER	1
5	29.43.25973	BOTTOM COVER HINGE PIN	1
6	98.334.030030	COTTER PIN, Ø3 X30 YELLOW ZINC PLATED	2



**ASSEMBLY STEP # 15 - 29.29.28130**

#	PART#	DESCRIPTION	QTY
1	29.41.28129	6 T HUB / BRAKE DISC	1
2	98.730.330155	BEARING 30211	1
3	98.730.330945	BEARING 30209	1
4	98.303.310381	CASTLE NUT, 1 1/2" NF	1
5	29.43.28131	WHEEL HUB WASHER	1
6	98.611.176970	SEAL, SAV 6657	1
7	98.232.190062	HUB SCREW, 3/4" x 2" 1/2 NF	5
8	98.306.350190	WHEEL NUT, WIDE FACE 3/4" NF	5
9	98.334.050070	COTTER PIN Ø5 x 70	1
10	29.46.28133	HUB COVER	1
11	98.460.310063	ALEMITE, STRAIGHT-LONG, 1/4 NF	1





**LOOSE PARTS**

#	PART#	DESCRIPTION	QTY
1	98.395.028170	AM 500 MECHANICAL JACK FOR AKRON GTX 3220 WITH TELEVEYOR	1
2	29.39.28175	AM 500 MECHANICAL JACK FOR AKRON GTX 3220 WITHOUT TELEVEYOR	1
3	29.39.28573	BRAIDED ELASTIC ROPE, Ø14	2
4	29.46.28580	ELASTIC ROPE FOR GRAIN BAG FASTENING	4



## 14. PARTS SUBJECT TO NORMAL WEAR AND TEAR:

Ordinary maintenance and spare parts replacement services of the parts detailed below are the equipment owner's exclusive responsibility, therefore, they will not be considered defects in material or manufacturing, but rather defects due to normal wear and tear; improper operation or insufficient equipment maintenance.

- Chains
- Augers
- Bearings
- Wheels
- Sprockets
- Brake System (brake pad ; shoe linings)
- Wear due to grain friction

### Parts subject to improper operation or insufficient maintenance.

Using the gearboxes without normal oil level or not complying with the transmission inlet specifications described in the user's manual.

Altering the maximum inlet torque (shear bolt system on PTO).

MACHINE	MAXIMUM ALLOWED INLET TORQUE	PROBABLE CAUSES THAT CAN ALTER THE MAXIMUM ALLOWED TORQUE
E 180 UNLOADER EXG 300 UNLOADER E 9250 FH BAGGER E 9250 D BAGGER E 9400 D BAGGER GTX 3210 BAGGER MAX 14 / 20 / 22 / 24 / 6,5 / 8,5 GRAIN CART	1860 N/m	Replacing the PTO's shear pin with a different bolt specification.  Using a PTO that exceeds the maximum torque allowed by the machine.
MAX 28 / 25 GRAIN CART GTX 3230 BAGGER	2130N/m	Replacing the PTO with a PTO with no shear pin device installed.
VERTICAL MIXER MXR 14	1600 N/m	

**Wheel nuts:** After around 30 hours of running or after changing a wheel, wheel nuts must be retighten according to the torque values detailed in the manual (31.3 kg x m= 307 N x m= 227 lbs x ft. - point 7.g).

Special care should be taken to the wheel nuts tightening if the machine has moved over paths or roads. Failure to follow these instructions may cause rim damage or lost of it.



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